1933.

CITY AND COUNTY OF BRISTOL

HEALTH COMMITTEE

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

R. H. PARRY, **M.D., B.S., M.R.C.P. (Lond.), D.P.H.**

CONSTITUTION OF COMMITTEES.

The Lord Mayor :
F. C. LUKE, Esq., J.P.

Health Committee.

Chairman :
Alderman H. J. Maggs, J.P.

Vice-Chairman :
Alderman J. E. Jones, J.P.

Alderman J. J. Milton, J.P.
Councillor E. W. Andrews
,, L. H. Bateman
,, C. G. T. Bennett
,, Mrs. R. Burgess
,, W. H. Byrt, J.P.
,, E. T. Cozens, J.P.
,, H. S. Evans.
,, Miss L. Meade-King
,, J. Owen
,, V. J. Robinson
,, Sir L. A. Goodenough Taylor
,, H. A. White
,, T. J. Wise

Housing Committee.

Chairman :
Alderman J. E. Jones, J.P.

Vice-Chairman :
Alderman F. Sheppard, J.P.

Alderman F. F. Clothier, J.P.
Councillor C. S. Baston
,, C. R. Gill
,, A. G. Heard
,, H. R. Lee
,, G. A. Martin
,, A. L. H. Smith
,, H. A. Wall
,, H. A. White
,, T. J. Wise

Mental Deficiency Act Committee.

Chairman :
Alderman F. Sheppard, J.P.

Alderman F. F. Clothier, J.P.
Councillor W. H. Byrt, J.P.
,, R. C. Davies
,, A. F. Moon, J.P.
,, Mrs. E. A. Webb, J.P.
,, F. A. Webber
,, W. T. Wright
Mr. F. W. Phillips
Mrs. Nunn
Mrs. Pullin

The Town Clerk : Josiah Green, Esq.

CONSTITUTION OF COMMITTEES

(continued).

The full *Health Committee* is also the :—

Health (Accounts and Contracts) Committee
Maternity and Child Welfare Committee

In addition Joint Committees for co-ordinating the health and medical services of the Council have been appointed by the following Committees :—

Health and Public Assistance
Health and Education

Other Sub-Committees of the Health Committee are :—

Port Sanitary
Farms and Gardens
Public Health Institutions
Nursing Homes
Assessment
Establishment of Fish Frying Business
Staff
Central Maternity Clinic
Public Abattoir
Accommodation for Infectious Disease, Somerset C.C.
Pathological
Public Health Schemes

PUBLIC HEALTH OFFICERS.

(Note :—Further details concerning staffs of various sections will be found at the commencement of the particular section).

(a) Medical.

Medical officer of health (city and port) and school medical officer	R. H. Parry, M.D., B.S., M.R.C.P. (Lond.)., D.P.H.
Deputy medical officer of health	A. G. Morison, M.A., M.D., D.P.H.
Assistant Medical Officers of Health.	
Tuberculosis officer	C. J. Campbell Faill, F.R.C.P., Ed.
Assistant tuberculosis officer	J. Scott Currie, M.B., Ch.B.
Maternity and child welfare-	
Chief assistant	M. G. Hughes, M.B., Ch.B
Assistant medical officers, centres	G. Hartley, M.D., M.M. A. A. Craig, M.B., B.S., D.P.H. and four part-time assistants.
School medical service—	
Chief assistant	A. A. Dalby, *M.C.*, M.R.C.S., L.R.C.P.
Assistant medical officers ...	A. F. Alford, M.B., Ch.B. M. A. O'Donohoe, M.B., Ch. B., B.A.O. C. P. Hay, M.B., Ch.B., M.R.C.P. (Ed.) D.P.H. G. C. Kelly, B.Sc., M.D., D.P.H. A. R. Forbes, M.B., Ch.B., D.P.H. and one part-time assistant.
Ham Green Hospital and Sanatorium.	
Medical superintendent ...	B. A. I. Peters, B.A., M.D., D.P.H. Assistant medical officers—3
Southmead Hospital.	
Medical superintendent ...	P. Phillips, M.Sc., M.D. Assistant medical officers—3
Frenchay Park Sanatorium.	
Medical superintendent ...	K. H. Pridie, M.B., B.S., F.R.C.S., Eng.
Hortham Colony.	
Medical superintendent ...	W. Wyatt, M.B., Ch.B., D.P.M., L.D.S., R.C.S.
Stapleton Institution.	
Medical superintendent ...	S. Datta, M.D.
Eastville Institution.	
Medical superintendent ...	J. A. L. Roberts, M.B., B.S.

In addition, there are the consulting staffs available for departmental service at the various hospitals.

Certifying officers, Mental Deficiency Acts ...	3
District medical officers under Poor Law Acts	8
Public vaccinators	8

PUBLIC HEALTH OFFICERS

(*continued*).

(b) Others.

Dental surgeons	5 (four school medical and one joint health and schools).
Principal sister, external nursing services	Miss L. Elkins
Public analyst	E. Russell, B.Sc., Lond., F.I.C., F.C.S.
Veterinary surgeon (part-time)	G. E. Henson, M.R.C.V.S.

Sanitary inspectors.

Chief	J. A. Robinson, F.S.I.A.
Superintendent sanitary inspector ...	T. J. Cleal
Meat	3
Food, drugs and dairies	4
District	16

Housing inspectors.

Inspectors	3
Assistant inspector	1

Maternity and child welfare.

Superintendent health visitor	1
Deputy inspector of midwives and inspector of nursing homes	1
Health visitors	24
Welfare worker, affiliation orders, etc. ...	1*
Secretary, Boarding out Committee	1

* (Joint health and public assistance).

Tuberculosis.

Dispensary nurses	3

Infectious diseases.

Home nurses	3

Clerical staff.

Chief clerk	C. W. M. Vincent
Second clerk	J. G. Watson
Clerks	38 (7 temporary)

School medical service (under Education Committee).

School nurses	18
Orthopaedic nurses	3
Dental attendants ... ... (4 school and 1 joint health and schools).	5
Clerks	11

Vaccination officers	2 (1 part-time)
Supervising officer, Mental Deficiency Acts	1

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CITY AND COUNTY OF BRISTOL.

ANNUAL REPORT, 1933.

My Lord Mayor, Ladies and Gentlemen,

I have the honour to submit my annual report on the health and sanitary circumstances of the city for the year 1933.

By the following observations I desire to draw special attention to certain matters, further details concerning which are found in the body of the report.

Statistics (p. 15).

With a further fall in the birth rate and a slight rise in the death rate, the natural increase in population for 1933 has fallen to 1.66 per 1,000 population, as compared with 3.52 per 1,000 for the previous year. This is the lowest figure yet reached in the history of our city. A similar fall next year will mean a decrease in the population unless there is a notable increase in immigration into the city.

On the whole, the health statistics for 1933 are most disappointing. They certainly do not attain the standard which we were led to expect from the progress made in previous years.

The following figures are worthy of notice :—

1932		1933
2.53	Maternal mortality...	4.44
51.4	Infant mortality ...	54.9
26.05	Neo-natal mortality	30.4
37.9	Stillbirths	44.4
0.83	Tuberculosis death rate	0.95

It may be no mere coincidence that all the above rates are higher in the same year.

The infant mortality rate has been described as the most sensitive index that we possess of the social welfare of the people. The increase last year in the infant mortality rate was mostly due to the increase in the neo-natal rate. Stillbirths, and neo-natal deaths, are closely connected with the health of the mother during pregnancy : the maternal mortality rate increased by nearly 100 per cent. over the figure for 1932. The tuberculosis death-rate is certainly a most valuable index of the welfare of the people, especially with reference to the state of their nutrition.

It is difficult to interpret the true meaning of these figures. On the one hand there is the general inclination to attribute all adverse effects to the accompaniment and results of an industrial depression. On the other hand, we have yet to learn something concerning the unknown factors which together bring about the re-appearance after certain intervals of some diseases. Further, the mortality rate, and even the incidence of diseases may be markedly affected by the intervention of an epidemic of another disease. Thus, during the first three months of 1933 an epidemic of influenza prevailed in Bristol, and therefrom more than twice the number of deaths occurred than was the case during the same period of the previous year.

Concurrently with this outbreak of influenza there was an increase of 31 per cent. in the number of deaths from tuberculosis of the respiratory system, and similarly the number of deaths under one year of age from all forms of pneumonia was greater by 13 per cent. than for the same period in the previous year.

Housing (p. 58).

The present time would seem appropriate to survey the housing problem in Bristol, and in doing so it is necessary to consider some of the local, as well as other, difficulties.

(1). One of the great difficulties in connection with the housing problem is that of vermin infestation, and a scheme has been worked out in Bristol as follows, and has been found to be very effective. During the detailed examination of houses preparatory to a representation of an area, the inspectors classify each dwelling thus—

(*a*) No evidence of vermin.

(*b*) Slight evidence in, and confined to bedding or clothing which can be dealt with effectively at the disinfecting station.

(*c*) More serious infestation of clothing, or bedding, or infestation of furniture, or vermin in walls, etc. of house, indicating likelihood of infestation of bedding, furniture, etc.

These groups are dwelt with in the following manner—

Class (*a*). No action necessary.

Class (*b*). Arrangements made for Washington-Lyons treatment at the disinfecting station, of clothing and bedding, and persuasion of members of family to have bath, with disinfection of wearing-clothing at the disinfecting station.

Class (*c*). Dealt with by a cyanide process, that is, handing over the matter of disinfestation to a contractor.

A removal van has been adapted for the fumigation, by drawing a window in front. This allows of thorough through ventilation of the van.

The Housing Committee have set aside four houses as "temporary dwellings." We choose these according to the area in which we are re-housing, thus preventing any becoming known in the city as " bug-houses."

On the morning of evacuation of the condemned house, into the van are put all furniture and bedding and clothing, not actually worn. The van is taken to the fumigation site, (a suitable place beside the disinfecting station) and the appropriate exposure given (eight hours). In the meantime the family proceeds to the temporary dwelling, which has been fitted with all furniture, bedclothing, and cooking utensils. They are visited by a "lady advisor," and told of the simplicity of keeping the new home free from vermin—baths for themselves, cleanliness of clothing, polishing and scrubbing, etc., open windows, etc., and during residence in the temporary dwelling, the opportunity is taken to see to the bathing of the inhabitants.

After being opened out, the fumigation van remains overnight at the disinfecting station, and the next day is unloaded into the new permanent home, where fires are lit, and thorough final dispersal of the gas is seen to. On the following day, the family proceeds from the temporary house to the permanent home. The bedding in the temporary houses, of course, is disinfected after every family's use.

It is considered important that the contractors for the fumigation accept full responsibility during the process of fumigation, and that the effects remain entirely under their responsibility until they give a clearance certificate.

The all-in expenditure is about £4 10s. to £5 0s. 0d. per family dealt with, but it is hoped to reduce this by dealing with more than one family's goods in the van at one time.

(2). Formerly the inspection of houses of the working classes was entrusted to the department of the chief housing inspector, who, with the assistance of four inspectors and clerical staff, were responsible to the Housing Committee for the administration of the housing acts. With the retirement on superannuation of the chief housing inspector it was decided to re-organise and to hand over the work to the district sanitary inspectors, the inspectors' districts being made smaller by the addition of two more. A special housing inspector was retained, however, for general housing work. Last year, upon the death of the special housing inspector, two were appointed and their duties were allocated—in the one case for the special purpose of slum clearance and demolition, and the other for the supervision of repair work under the housing acts. These officers work in close co-operation with the district sanitary inspectors.

(3). When the five-years' plan was drawn out, it was realised that the medical officer of health, with all his other duties which could not be delegated, must not be too intimately concerned with the details of housing inspection if the latter was to proceed rapidly. By retaining such duties too strictly in his own hands, with many other responsibilities, a medical officer of health could be a great hindrance to rapid progress. It is true that slum clearance is of the greatest importance to public health and that the medical officer of health must keep himself in close contact with the progress of the work and the policy involved, and must be prepared to advise when required. On the other hand, the straight-forward cases, and the details required for enquiries, can very well be dealt with by other experienced officers in the department. For that reason, with the permission of the Committee, the general supervision of the housing and sanitary work was delegated to the deputy medical officer of health, who also attended the enquiries.

(4). I would refer the reader to my report for 1930 wherein is pointed out the slow progress of slum clearance, the difficulties in that connection, and the need for definite allocation of houses by the local authority to the worst tenants who could not find a home elsewhere. Since that report was written the position has been met as it never has before. By circular 1331 local authorities are made to concentrate on demolishing unfit houses and finding homes for the displaced inhabitants. Whatever may be the political aspect of this question, to the public health worker it has meant this—henceforth these slums at least will disappear for ever and can never again be the source of pain and disease—moral, mental and physical. It is too true that houses and more houses are required. Overcrowding exists in many parts of the city, and there is need for dealing with this problem. But the most urgent problem of all was, and is, the removal for ever of unfit houses, whether overcrowded or not. Past experience in this matter at least has proved that best progress can be made by tackling one problem at a time.

In May, 1933, the Council adopted their five-year plan to clear 2,500 houses by clearance area action, and 400 by individual demolition orders. For the first twelve months, i.e., to April, 1934, 428 houses have been represented in clearance areas, and 134 individual demolition orders have been made.

In 1933, 21 official representations were made to the Council under section 51 of the Housing Act, 1930 : this represented 357 houses and a population of 1,754. In addition, 100 demolition orders were made during the year.

It is interesting to note the comparative figures indicating progress in slum clearance during the last three years—

These figures indicate the number of houses declared unfit either in clearance areas or by individual demolition orders.

During 1931	...	202
1932	...	288
1933	...	457

The re-organisation of the department for increased work was completed by December, 1933, and up to the time of writing, from the beginning of the year, 446 houses have been represented in clearance areas or for demolition orders. Great activity also prevails in repair work under section 17 of the Housing Act, 1930. Owing to the staff difficulties mentioned above, 59 notices only were served during 1933, but from January to May, 1934, 158 have already been served.

Therefore, in spite of difficulties and re-organisation during last year, the city can be satisfied that the progress during the twelve months indicates a complete disappearance of the worst of Bristol's slums before the end of 1936.

Laboratory facilities. (p. 25).

An interesting report by Professor Walker Hall upon the work of the preventive medicine department is included. This department only operated for three months of the year under review, but this allowed sufficient time for a complete scheme to be drawn out and the details are given in the report.

The main objects of the scheme are :—

(1) To make laboratory facilities available to every medical practitioner in the city, whose patients cannot afford the assistance of a private pathology specialist.

(2) To obtain rapid diagnosis especially in cases of infectious disease. In diphtheria in particular, is rapid diagnosis necessary. Private practitioners have, in the past, far too readily depended upon laboratory diagnosis, and it is extremely difficult to persuade them that final diagnosis must always be on clinical grounds. By the direct examination of swabs, it has been possible to accelerate diagnosis with the resulting vast improvement in the results of treatment.

(3) The laboratory has given immense assistance to the department in recognising milk which has not been efficiently or not properly pasteurised. In this way it has been possible to keep closer supervision over defective plants and unreliable dealers.

(4) The work in connection with food is of special note and I refer here to the remarks of Professor Walker Hall on page 26.

Fertilisers and Feeding Stuffs Act, 1926 (p. 69).

An interesting paper by Inspector Lloyd relating to this Act is included. The main difficulties in connection with the operation of this act and our frequent helplessness is clearly shown.

Dietaries in poor law institutions. (p. 70).

In accordance with circular 1243 of the Ministry of Health the dietaries in the above institutions were reconsidered and in the main it showed that in Bristol there was little fault to be found with the diets supplied. Quantity was ample, in fact in some instances it could be said to be excessive. The only alterations necessary were of minor importance, and included the addition of larger quantities of fresh food, particularly fruit and vegetables.

Prevalence and control of infectious disease (p. 74).

The outstanding features of the year in regard to this branch of the work are the following :—

Diphtheria.

The incidence from this disease increased by .24 to 1.56 per 1,000 population, while the case mortality for the whole city fell from 4.1 in 1932 to 3.4 per cent. in 1933. It is too early to claim that this is the result of quicker diagnosis at the laboratory, although no doubt it was a contributory factor.

Immunisation against the disease has progressed during the year, but on the whole the response of the parents has been most disappointing. Its value is again shown, and although it is true that cases have occurred amongst children who have been immunised and reported negative to the tests, there is no doubt that it is of immense value in warding off the disease. Examples are continually being brought to my notice of young members of a family who have been artificially immunised being completely protected, whilst the rest of the children in the family have caught the disease.

Tuberculosis.

As mentioned in previous reports, institutional treatment for tuberculosis has been "declared" in Bristol. This has set up a definite problem of what to do with chronic quiescent tubercular patients in sanatoria, who are without homes, or who have very poor homes, and are fit for discharge. A scheme by which we have been able to deal with four patients has been found to work most satisfactorily. Briefly it is as follows :

The Public Assistance Committee through relieving officers have supplied the medical officer of health with names and addresses of persons who are willing to receive patients of this description into their homes. These private homes are inspected in the first instance by nurses from the tuberculosis dispensary, and reported upon as to their suitability for the purpose. A general talk on the requirements is given to the landlady by the tuberculosis officer himself.

On arrival at the home, the patient applies to the relieving officer and the Public Assistance Committee then decides the amount of relief to be granted. It is usual for the maximum amount of relief to be made up, i.e., 25/- per week.

Measles.

We were fortunate to escape from an epidemic of measles which was due in Bristol last year. As a matter of fact, cases were numerous during the second quarter of the year, but the weather was so favourable that the disease did not take the usual toll of life that has been characteristic of it during the last few years.

Cancer (p. 87).

A very interesting report on the work of the Radium Centre by Dr. Wigoder, the radium officer, at the Royal Infirmary is included.

Blind Persons (p. 104).

The increased interest shown by the Blind Persons Act Committee in the prevention of blindness is most encouraging. A scheme is now in operation whereby all children leaving the myopic school are kept under the supervision of the consulting ophthalmologist to the Blind Persons Act Committee. This officer is also the consulting ophthalmologist to the Education Committee, so that in this way the children will remain under the supervision of the same eye specialist until they are settled in life, and realise the importance of not following employment for which their eyesight is not suitable. The Bristol Crippled Children's Society have also undertaken to extend the work of their welfare officer to include the home supervision of school-leaving myopic children. Arrangements have been made for six months notice of impending school leavers to be given by the head-teacher so that suitable arrangements to keep these myopic children under supervision can be maintained.

Ham Green Hospital (p. 109).

It is a pleasure again to include a most interesting report by Dr. Peters, the resident medical superintendent. His method of treatment in scarlet fever has resulted in almost complete prevention of renal complications, which were a common feature of this disease.

Dr. Peters again draws attention to the high proportion of dangerously ill cases of diphtheria that are admitted into the hospital. Nevertheless, the fatality of the disease has been extremely low.

An interesting point made in this report is that there is a mistaken idea that patients in a fever hospital run a big risk of catching some other disease during treatment. Dr. Peters has proved conclusively that the risk run in a fever hospital is much smaller than is the case in a general hospital, and he attributes this to the spacing out of the patients.

Ham Green Sanatorium (p. 113).

The medical superintendent draws special notice to the seriousness of the disease in many of the cases when they are admitted into the sanatorium. Ten per cent. died within fourteen days of admission, and from an enquiry made of the patients admitted, 75 per cent. did not seek advice until they were helpless. I can only repeat what I said in my report for 1930 :—". . . . . . . a considerable proportion of cases suffering from pulmonary tuberculosis are only notified when the disease is well advanced and consequently notification is no true guide to the department of the prevalence of the disease, especially when in its early stages. Indeed it is doubtful whether the number of notifications ever will be a reliable guide until some provision is made for the proper after-care of the patient and of his family on the lines indicated by the chief medical officer of the Ministry of Health in his report for 1929."

Southmead Hospital (p. 116).

There were 3,781 patients treated at the hospital during the year. Of these, 2,860 were discharged, 494 died, and 437 remained in hospital at the end of 1933.

It is most interesting to note that of these 2,144 were in hospital for less than four weeks, 785 had a stay of between four and thirteen weeks, and 425 only were in hospital for thirteen weeks or more. In regard to the maternity section, there were 621 confinements during the year in hospital, and 59 delivered on the district.

Although the year under review was characterised by a state of economy throughout the municipal departments, yet the various committees concerned with the health services have had progress continuously before them. Reorganisation and consolidation have been brought about in various sections of the department—all with the object of increasing efficiency and various schemes have and are being prepared for future development when the opportunities present themselves.

The following contributions to medical literature have been made by members of the staff since my last report was published :—

(1) Dr. R. H. Parry.

"Cancer as a public health problem."

Presidential address to the West of England branch, Society of medical officers of health.

(*Public Health*, February, 1933).

(2) Dr. C. Bruce Perry.

"The value of salicylates in the prevention of rheumatic lapses."

(*Lancet*, 22nd April, 1933).

"Thrombo-phlebitis in acute rheumatism," with clinical case notes by Dr. O. C. M. Davis.

(*Lancet*, 28th October, 1933).

(3) Dr. K. H. Pridie.

"The treatment of tuberculous disease of the spine in children."

(*Medical Press and Circular*, March 21st, 1934).

(4) Dr. Roland Jordan.

"Pathological fracture in gumma of tibia."

(*British Medical Journal*, 14th April, 1934).

The work of a busy year was lightened by the uniform courtesy extended to me by the chief officers of the Corporation and the various committees with which I have been associated during the year. Particularly, my best thanks are due to the chairman and members of the Health Committee for their encouragement in the maintenance and development of public health work in Bristol.

I am, my Lord Mayor, Ladies and Gentlemen,

Your obedient servant,

R. H. PARRY,

Medical Officer of Health.

Public Health Department,
Bristol.
June, 1934.

1.—SOCIAL CONDITIONS.

1932		1933
19.674	Land acreage	22,555
1,528	Tidal water acreage ...	1,528
403,900	Population—Registrar General's mid-year estimate ...	410,870
90,924	Estimated no. of inhabited houses	93,958
1,532	Estimated no. of void houses	1,543
£2,694.128	Rateable value exclusive of	£2,675,704
£21,299	Government property	£21,112
£10,833	Penny rate yield (approx.) ...	£11,034
£163,678	Outdoor relief	£168,195
4,902	Cases relieved on 27th June	4,666
4,757	,, ,, 26th Dec.	4,803
13,669	Persons relieved on 27 June	11,788
12,324	,, ,, 26th Dec.	11,684
17,671 (4th Qr.)	Highest recorded number of wholly unemployed men ...	18,141 (1st Qr.)
2,796 (1st Qr.)	,, ,, women	2,344 (1st Qr.)
1,050 (3rd Qr.)	,, ,, boys	1,092 (3rd Qr.)
813 (3rd Qr.)	,, ,, girls ...	949 (3rd Qr.)
1,189	Parks and open spaces (acres)	1,192
11	Public baths and washhouses	11
150	Public conveniences ...	159
66	Public bowling greens-rinks	66
47	Public tennis courts ...	47
5	Public putting greens ...	6
53	Public drinking fountains ...	53

The figures in the foregoing table indicate the changes which have occurred during the year in some of the more important matters bearing on the social life and welfare of the community.

The area of the city was extended on the 1st April by 2,881 acres under the Local Government Act 1929 (extension of city boundaries under Somerset Review Order 1933) as detailed in my report last year.

The *population*, estimated by the Registrar General at mid-1933, has increased by 6,970 over the figure supplied for mid-1932, the total inhabitants having now reached 410,870. This estimate of the mid-year population relates to the area as constituted after the change in boundary referred to above, but as the numbers of births and deaths include, so far as relates to the portion of the year prior to the change, those occurring in the old area, adjustment requires to be made in the above-mentioned population to make allowance for the change of area and the following adjusted figure was accordingly used for the calculation of birth and death rates for the year 1933 : 409,400.

The estimated number of *inhabited houses* on the 31st March, 1934 according to the rate book, has increased by 3,034, void houses by 11, giving a total of 95,501 houses, inhabited and void, compared with 92,456 last year, while the *rateable value* of the city on the 1st April, 1933, exclusive of government property, has increased by £81,576, the total of £2,775,704 representing a penny rate yield for the half year ended 31st March, 1933 of £10,963 and for the half-year ended 30th September, 1933, of £11,105. The rates levied for the year were 12/- in the £, a drop of sixpence. Of this sum, expenditure on public health services represent 2/6.3d. made up as follows :—

ADMINISTERED BY HEALTH COMMITTEE	1/2.3d.
Hospitals, sanatoria, etc.	
(a) for tuberculosis	4.4d.
(b) ,, venereal disease	.6d.
(c) ,, infectious disease	2.3d.
(d) ,, general hospitals	1.4d.
Maternity and child welfare	2.4d.
Port sanitary service	.1d.
Other health services	3.1d.
ADMINISTERED BY SANITARY COMMITTEE	1/4.0d.
Sewers and sewage disposal	2.9d.
Collection, disposal, etc. of refuse	7.3d.
Baths, wash-houses, etc.	1.5d.
Parks and open spaces	3.0d.
Public conveniences	1.3d.

Bristol is amongst the lowest rated of all the ports and industrial centres of the United Kingdom.

The state of *employment* undoubtedly exercises a marked effect on the health and well-being of the people and Bristol—like the rest of the country—has for a long time experienced a lack of that prosperity which alone can bring in its train the blessings of good food, happiness and better living conditions for the masses.

The variety of our local industries (over 300 distinct industries) has protected us from suffering such deep trade depression as those towns where there is practically only one industry. There are over 21,000 people engaged in the distributive trades, 5,000 in the harbour, dock and river services, 8,000 in general engineering, a similar number in tobacco, 5,000 in cocoa and chocolate, and nearly 10,000 people in cardboard box, paper bags, stationery and printing.

The peak statistics for the year kindly furnished by the manager of the employment exchange (R. T. Stoddard, Esq.) indicate very little change in local employment conditions last year. His comments however—quoted below—give some indications of improved industrial conditions and brighter prospects.

" The unemployment position in Bristol during the past year has not been so serious as during 1932, and there were periods when the numbers of unemployed registered shewed an appreciable reduction by comparison with the figures of the corresponding periods of 1932. During the months of May to September, inclusive, there was a marked improvement in the position, and to some extent this may be attributed to the exceptionally dry summer, and the consequent large demand for seasonal workers. There were, however, during those months, indications in other spheres of improved industrial conditions.

The number of juveniles registered during 1933 was much in excess of the number for 1932. This was due, as you will no doubt appreciate, to the high birth rate in the years immediately following the war.

There can be no question that the figures of the past year, while shewing an improvement generally on those of 1932, still indicate an unsatisfactory condition of industry. It can, however, I think, safely be said that Bristol has not suffered as the result of trade depression to the same extent as many other large cities in the country. It is somewhat difficult to specify any particular industries as having specially contributed to the slightly better conditions of trade, and it can be assumed that the improvement has been spread over many of the large variety of industries in the locality.

There appears to be a more hopeful atmosphere concerning the current year, and it is gratifying to have grounds for believing that this optimism will not prove to have been misplaced."

Outdoor relief administered in the city for the year ending 31st March, 1934, showed an increase of £4,518 compared with the previous year.

The Weather of 1933.

I am indebted to Mr. H. H. Harding, F.R.Met.Soc., for the following meteorological report for 1933. The records are taken by Mr. Harding at Frampton Cotterell, and at St. Andrew's Park, Bishopston, by his associate, Mr. H. Vicars Webb. The results for the individual months appear in the table printed on page 136.

Observations at Bristol.

Mean pressure at 9 a.m., G.M.T. (corrected)...	30.005	inches.
Departure from average	+0.041	inch.
Greatest pressure at 9 a.m.	30.738	ins. on Jan. 23rd.
Least pressure at 9 a.m.	28.971	,, ,, Dec. 28th.
Total rainfall at *Bishopston* (St. Andrew's Pk.)	25.29	,,
Departure from average	—9.80	,,
Number of rainy days	154.	
Heaviest rainfall in 24 hours	1.66	,, ,, Feb. 24th.
Total rainfall at *Frampton Cotterell* ...	25.47	,,
Departure from average (25 years)	—6.12	,,
Number of rainy days	165.	
Departure from average (25 years)... ...	—19.	
Days with 0.04 in. or more	105.	
Days with less than 0.04 in.	60.	
Heaviest fall in 24 hours	1.13	,, ,, May 20th.
Mean humidity at 9 a.m.	83.2%	
Mean temperature (max. & min.)	50.2	degrees.
Departure from average (25 years)	+1.0	degree.
Maximum temperature in shade	87.8	degrees on July 4th.
Minimum temperature	16.8	,, ,, Dec. 7th.
Mean temperature warmest day	73.7	,, ,, Aug. 4th.
Mean temperature coldest day	25.0	,, ,, Jan. 24th.
Hours of bright sunshine	1,784½.	
Departure from average (25 years)	+236½.	
Days of bright sunshine	161.	
Days entirely overcast	66.	
Days upon which thunder observed ...	17.	
Days ,, ,, fog ,, ...	39.	
Days ,, ,, snow ,, ...	10.	
Number of frosty nights	78.	
Number of ,, on grass	105.	

In future years there is little doubt that the past twelve months in regard to their weather will be remembered as amongst the most sunny, dry and warm of the first half of this century. No promise of these characteristics however were given by their early days. New year's day, indeed, brought a fall of rain to this district of nearly three-quarters of an inch, and although in spite of this January's total fell a little short of normal, both the following months gave generously, with the result that the first quarter of the year showed an excess of rain locally of from two to two-and-a-half inches.

March, however, although giving two periods—the 1st to 8th and the 15th to 20th—of heavy rains, also gave indications of the wonderful weather to come, for separating these periods, and following the last, exceptional conditions prevailed, sunshine being almost continuous, with temperatures of 60 degrees and upwards on many days. Only twice before this century was the month so warm, this being in 1903 and 1912 when the mean temperatures were 46.2 and 46.1 degrees respectively. A noteworthy range of temperature was recorded upon the 28th, the early morning hours giving the minimum for the month while later a reading of 68.5 deg. was recorded, the highest for March since 1918, with one exception. This exception, which is unequalled for at least three-quarters of a century, occurred in 1929 when on the 28th and two following days, 70 degrees were exceeded.

April's first three weeks were continuously fine, but from the 23rd onwards, there was a series of gentle rains. This period of just over three weeks of rainless weather proved the longest of the year in our locality. May's early days were not promising for the first fortnight was wet and sunless. The third week however, brought a welcome change and while there were no days entirely free from cloud, for the remainder of the month June conditions predominated. A pleasing feature was a complete absence of frosts.

Perhaps the most noteworthy weather of the year followed during the early June days, these giving temperatures from the 3rd to the 8th, which is probably unique for so early in the season. The maximum recorded on these days were as follows :—

June 3rd	...	77.8 degs.	June 6th	...	86.8 degs.
,, 4th	...	81.8 ,,	,, 7th	...	85.8 ,,
,, 5th	...	85.8 ,,	,, 8th	...	83.5 ,,

The nearest approach to such warmth so early in recent years, was in May 1922 when the three concluding days, gave maximum of just 80 degrees, followed by 82 on the 1st of June. 1925 also brought great heat early in the year, four maximum of 80 degrees and upwards being recorded from June 9th to the 12th, with 85.6 degrees on the 11th as the highest. Previous high temperatures recorded in June were 86 degrees in 1858 (Mr. W. C. Burder, F.R.A.S.) and 86 degrees in 1878 and 87 degrees in 1893 (Mr. R. F. Sturge, F.R.Met.Soc.). As in the year under review, the maximum reported from other stations was 86 degrees, the warmth locally was as great as anything experienced elsewhere.

More normal weather prevailed after the 9th, but the month proved the warmest June locally since 1896 (mean 62.6 degrees).

Apart from 1911 and 1921 July brought more sunshine and heat than in any year this century, and the principal results for the three years at this station was as follows :—

	Mean. temp.	Rainfall.	Sunshine.
1911 ...	65.7 degrees.	0.03 inch.	328 hours.
1921 ...	67.1 ,,	0.53 ,,	264 ,,
1933 ...	64.9 ,,	1.81 ,,	244 ,,

As with June, the opening days were rainless, but from the 8th to the 17th inclusive there were daily falls but the amounts were not large. Conditions then again became settled and warm sunny weather, with great heat on the 26th and 27th, prevailed to the close.

As in the preceding year, August was dry and warm (two such fine Augusts in succession is quite unprecedented and in both these years and also in 1911 the monthly characteristics were remarkably similar, as the following details show :—

	1911	1932	1933
Rainfall ...	1.35 inches.	0.82 inches.	1.33 inches
Mean temp. ...	65.6 degrees.	65.4 degrees.	64.4 deg's.
Sunshine ...	237 hours.	191 hours.	240 hours.
Maximum of 70 degrees and above ...	27	24	23
Thunderstorms	2	2	2

Like the three preceding months, September began with a long period of fine weather, but rain came with the afternoon of the 12th, the fall proving the heaviest experienced locally since February. Frequent showers followed with a further downpour around the 25th, with the result that this month with May were to prove alone in giving an excess of rainfall since the winter.

With the wettest time to come, plentiful rains were now confidently expected, but of a remarkable year's weather that of the autumn was to prove the most unusual. October, it is true, brought a fair amount of rain, but the following months proved the driest of the twelve and excepting for 1917 when the falls at this station and at Clifton were 1.32 inches and 1.89 inches, there is nothing to approach so small a total since 1879. Then following a wet and dismal season—without doubt the most disastrous from an agricultural point of view of the 19th century—the three autumn months only gave in Bristol 3.21 inches (W. C. Burder). In 1855, also according to the same authority, November and December's rainfall only totalled 1.53 inches, but this followed a fall of over six in October.

In other aspects also the late autumn months of December were unusual, winds from an easterly point being recorded on no less than 54 days out of the 92, a characteristic seldom experienced at this season. Also, although October gave temperatures well above the average, the cold experienced in December was greater than anything recorded for this month locally since the great frost of 1890-91.

As a whole the season must be regarded as a very favourable one from an agricultural point of view, for in this district at all events although the rainfall throughout the summer month was consistently well below the average, there was no prolonged period entirely without rain such as has often been experienced in past years. A noteworthy feature was the perfect conditions prevailing throughout each of the great holidays of the year.

Ultra-violet radiation.

The monthly average readings of ultra-violet radiation in 1932 reported for Bristol to the Sunlight League by Mr. G. H. Brown, Bristol Meteorological Observatory, were as follows :—

Year	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Av.
1931	0.7	0.9	1.3	3.0	3.6	6.0	4.6	2.4	1.9	2.6	0.8	0.3	28.1	2.34
1932	1.0	1.0	1.8	1.0	1.7	5.5	3.5	5.3	2.1	1.4	0.6	0.7	24.6	2.05
1933	0.6	0.6	2.8	4.2	3.2	5.4	5.0	5.0	2.9	1.4	0.8	0.6	32.5	2.70

The readings for 1933 and for the year 1932 show readings with glass tube readings deducted from the quantity tube readings. This accounts for the 1931 readings appearing high.

II.—VITAL STATISTICS.

Summary for 1933.

1932	EXTRACTS FOR THE YEAR.	1933
15.01	BIRTH RATE per 1,000 population	13.66
11.49	DEATH RATE ,, ,, ,, ...	12.00
3.52	Natural increase ,, ,, ...	1.66
51.4	INFANT MORTALITY per 1,000 livebirths—	54.9
51.0	Legitimate	53.7
64.5	Illegitimate	87.6
26.05	NEO-NATAL MORTALITY per 1,000 livebirths ...	30.4
37.9	STILLBIRTH RATE per 1,000 TOTAL births ...	44.4
2.53	MATERNAL MORTALITY per 1,000 TOTAL births	4.44
.63	Puerperal sepsis	1.71
1.90	Other puerperal causes	2.73
0.23	ZYMOTIC DEATH RATE per 1,000 population ...	.22
6,065	*LIVEBIRTHS :	**5,592**
2,983	Legitimate males	2,759
2,865	,, females	2,639
5,848	Total	5,398
111	Illegitimate males	98
106	,, females	96
217	Total	194
239	*STILLBIRTHS—	**260**
139	Legitimate males	125
90	,, females	120
229	Total	245
5	Illegitimate males	6
5	,, females	9
10	Total	15
4,642	DEATHS—	**4,913**
38.98	Percentage of deaths occurring in public institutions	37.08
4	Maternal deaths from sepsis	10
12	,, ,, ,, other causes	16
2	Deaths from measles (all ages)	14
31	,, ,, whooping cough (all ages) ...	16
34	,, ,, diarrhoea (under 2 years of age)	31
294	,, ,, pulmonary tuberculosis... ...	336
154	,, ,, influenza	292
22	,, ,, diphtheria	22
3	,, ,, scarlet fever	4

* Figures supplied by Registrar General.

Note (1). Unless otherwise stated all figures relating to vital statistics in this report are compiled from local returns.

(2). The vital statistics furnished by the Registrar General for Bristol for 1933 together with annual summaries back to 1918 and quinquennium figures from 1881/1885 to 1926/1930 are printed in the appendix to this report (page 128 *et seq.*) together with comparative rates for England and Wales for births, deaths, infant and maternal mortalities.

Comparative Statistics, 1933.

	Population	Rate per 1,000 population.		Rate per 1,000 live births	Rate per 1,000 total births		
					Maternal deaths		
		Live Births	Deaths	Deaths under one year	All causes	Puerperal sepsis	Still-births
England & Wales	—	14.4	12.3	64	4.23	1.71	41
118 County Boroughs ...	—	14.4	12.2	67	—	—	—
Birmingham ...	1,023,500	14.7	11.0	66	3.57	1.98	40.2
Liverpool ...	866,013	19.5	14.4	98	3.41	1.65	38.6
Manchester ...	771,165	14.41	13.41	75	4.87	1.45	49.8
Sheffield ...	511,820	14.02	11.95	63	4.65	2.12	46.1
Leeds ...	485,000	13.7	13.55	81	3.87	2.15	47.7
Bristol ...	**409,400**	**13.66**	**12.00**	**55**	**4.44**	**1.71**	**42.8**
Bradford ...	296,300	13.17	14.78	81	5.17	2.22	38.5
West Ham ...	282,900	15.5	11.7	64	1.8	1.1	36.0
Nottingham ...	281,500	15.74	13.32	85	3.7	1.9	41.0
Portsmouth ...	251,200	15.3	12.4	51	1.98	.99	41.9
Cardiff ...	222,000	15.5	13.6	77	4.70	1.38	48.6
Plymouth ...	206,200	15.67	13.23	58	5.95	2.08	37.5

Above are given comparative statistics for Bristol compared with eleven other large towns, the county boroughs, and with England and Wales. The features in regard to the figures for Bristol are as follows :—

1. The city has the lowest birth-rate with the exception of Bradford, our birth-rate being .7 below the rate for the whole country.
2. With the exception of Birmingham, West Ham and Sheffield we have the lowest death rate, and .3 below the rate for the whole country.
3. Our infant mortality rate is the lowest of those quoted with the single exception of Portsmouth, and is 9 per thousand below the rate for the whole country.
4. Our maternal mortality and stillbirth rates equal or are slightly above the rates for the whole country.

Marriages.

Marriage rates, 1924-1933.

		1933	1932	1931	1930	1929	1928	1927	1926	1925	1924
Marriages ...		3,183	3,098	3,287	3,320	3,197	3,059	3,071	2,845	3,012	2,924
Rate	Bristol ...	15.5	15.3	16.4	16.8	16.3	15.7	15.9	14.8	15.6	15.1
	England and Wales ...	15.7	15.2	15.6	15.8	15.8	15.3	15.7	14.3	15.2	15.3

The marriage rate for 1933 shows a rise of .2 per thousand. The provisional marriage rate for England and Wales for the same period was 15.7 per thousand population.

Births.*

1932			1933					
			Legitimate		Illegitimate		Total	
Live	Still		Live	Still	Live	Still	Live	Still
6,065	239	TOTAL ...	5,398	245	194	15	5,592	260
15.01	0.59	Rate per 1,000 living ...	13.19	.60	.47	.04	13.66	.64
	37.91	Rate per 1,000 total births		41.9		2.5		44.4

* Registrar General's figures.

Total births registered by sex and legitimacy and in registration sub-districts.†

Total 1932		Total 1933	Live births.		Still births		Rate per 1,000 in districts	
			Males	Females	Males	Females	Live	Still
6,317	Legitimate ...	5,923	2,897	2,754	140	132		
269	Illegitimate ...	236	109	110	6	11		
6,586	TOTAL ...	6,159	3,006	2,864	146	143		
529	Ashley ...	444	203	220	8	13	7.20	.36
1,357	Bristol South	1,268	634	592	17	25	13.20	.45
1,515	,, Central	1,507	737	663	55	52	39.20	2 99
759	Clifton ...	799	398	370	14	17	17.75	.72
999	St. George ...	800	399	374	19	8	9.16	.32
570	Stapleton ...	456	202	233	10	11	7.90	.38
857	Westbury-on-Trym ...	885	433	412	23	17	31.76	1.50

† These figures are uncorrected Rates on census population.

Live Births.

The provisional birth rate for England and Wales was 14.4 per 1,000 population, the lowest recorded nationally for the fifth year in succession, being .9 below that for 1932 and 1.4 below that for 1931.

As regards Bristol's birth rate of 13.66 per 1,000 population, it is to be noted that

(*a*) the rate is again the lowest birth rate ever recorded in Bristol.

(*b*) the rate is a decrease of 1.35 on the rate for 1932 and 2.6 on the mean for 1926-1930.

(*c*) If we compare this year's birth rate with the mean birth rate for the first five years of this century (27.2 per 1,000) we are confronted with a drop of 13.5 per 1,000. This means that 5,300 fewer babies were born in Bristol last year than would have been the case had the birth rate been the same as the mean for 1901/1905.

(*d*) The natural increase of the population, or in other words, the excess of births over deaths, was 1.66 compared with 3.52 in 1932, and an average of 4.6 for the previous ten years.

(*e*) There were 209 illegitimate births during the year, or 18 less than in the previous year. This figure equals 3.6 per cent. of the total births, which was the ratio of illegitimate births in 1932.

Stillbirths.

The stillbirth rate per 1,000 population was .64, an increase of .05 compared with 1932, while the rate per 1,000 total births (including stillbirths) was 44.4 compared with 37.9 last year. The corresponding figures for England and Wales were .62 and 41. Illegitimate stillbirths equalled 5.8 per cent. of the total stillbirths. Prior to this year, when the rate approximates to the average for the preceding five years, the stillbirth rate in Bristol has been steadily declining since 1928, the first complete year in which stillbirths were registrable. In that year the corresponding figures were .72 and 42.3.

Births notified.

The number of births notified under the Notification of Births Act, 1915, is included in the report on the maternity and child welfare section.

Deaths.

1932		Principal causes of death.	Net deaths in 1933	% to total deaths.	Death rate per 1,000
2	1	Typhoid and paratyphoid fevers ...	2	.04	.004
2	2	Measles	14	.28	.03
3	3	Scarlet fever...	4	.08	.01
31	4	Whooping cough	16	.33	.04
22	5	Diphtheria	22	.45	.05
154	6	Influenza	292	5.93	.71
11	7	Encephalitis lethargica	6	.12	.02
11	8	Cerebro spinal fever	6	.12	.02
294	9	Tuberculosis of respiratory system	336	6.84	.82
40	10	Other tuberculous diseases ...	54	1.10	.13
20	11	Syphilis	17	.35	.04
23	12	General paralysis insane, tabes dorsalis	22	.45	.05
613	13	Cancer, malignant disease	584	11.89	1.43
50	14	Diabetes	56	1.14	.14
253	15	Cerebral haemorrhage, etc. ...	255	5.19	.62
1,060	16	Heart disease	1,156	22.53	2.82
17	17	Aneurysm	16	.33	.04
33	18	Other circulatory diseases	20	.41	.05
167	—	Arterio-sclerosis	183	3.73	.45
185	19	Bronchitis	178	3.62	.44
256	20	Pneumonia (all forms)	282	5.74	.69
70	21	Other respiratory diseases	94	1.91	.23
40	22	Peptic ulcer	21	.43	.05
55	23	Diarrhoea, etc.	41	.83	.10
32	24	Appendicitis	25	.51	.06
11	25	Cirrhosis of liver	11	.22	.03
11	26	Other diseases of liver, etc. ...	21	.43	.05
96	27	Other digestive diseases	99	2.02	.24
202	28	Acute and chronic nephritis ...	181	3.68	.44
4	29	Puerperal sepsis	10	.20	.02
12	30	Other puerperal causes	16	.33	.04
168	31	Congenital debility, premature birth, malformations, etc.	188	3.83	.46
142	32	Senility	1.39	2.83	.34
64	33	Suicide	57	1.16	.14
137	34	Other violence	154	3.13	.38
319	35	Other defined causes	314	6.39	.77
28	—	Rheumatic fever	20	.41	.05
4	36	Causes ill-defined or unknown ...	1	.02	.002
4,642			4.913	100.00	12.00

The total number of deaths registered during the year was 4,913, an increase of 271 on the number recorded in 1932. The deaths comprised 2,400 males and 2,513 females. This net figure gives a death rate of 12.00 per 1,000 of the population as compared with 11.49 for the previous year and 11.9 for the five years 1926/30. Bristol's death rate has thus remained very uniform during the last few years

The provisional death rate for England and Wales for 1933 is 12.3 per 1,000 (.3 higher than Bristol) and 12.2 for the combined county boroughs.

Heart disease (with 23.53 per cent.) again heads the list, in order of numerical importance, as the principal cause of mortality followed by respiratory diseases excluding pulmonary tuberculosis (11.3 per cent.), cancer (11.9 per cent.) and pulmonary tuberculosis (6.8 per cent.) which together accounted for 53.5 per cent. of the total deaths.

Causes of death which show notable increases, compared with the previous year, in the death rate per 1,000 population are influenza (.33), heart disease (.20), puerperal causes (.18), respiratory diseases (excluding pulmonary tuberculosis) (.10), and tuberculosis (.12) mainly pulmonary (.09). Sixty-four per cent. of the respiratory deaths, including influenza, occurred in the first quarter of the year, when such diseases are usually prevalent.

The notable decreases in the death rate per 1,000 are those recorded for cancer (.09), and nephritis (.06), the former being specially interesting, 1933 being the first year since 1928 to fail to show an increase in the deaths from this disease. The death rate was stationary in several instances, notably diphtheria and typhoid fevers.

Death rates in quarters.

The death rate for the first quarter of the year was 17.60 per 1,000 ; for the second, 10.17 ; for the third, 8.42 ; and for the fourth, 12.13. These rates show the considerable variation which customarily takes place in the seasonal mortality. The first quarter is usually the heaviest and respiratory causes, especially influenza, account for the comparatively high death rate recorded. Whooping cough was responsible for 11 deaths and measles for 12 deaths, in the first and second quarters.

Causes of death at ages.

The table on p. 23 gives the number of deaths according to age groups. The number of deaths of children aged 0-5 amounted to 433, or 8.8 per cent. of the total deaths ; children of school age 5-15 totalled 99 (2.0 per cent.) ; 15-25, 182 (3.7 per cent.), 25-45, 504 (10.3 per cent.) ; 45-65, 1,262 (25.7 per cent.) ; 65 and upwards, 2,433 (49.5 per cent.). The average age of death of persons in the last age group was 75 years 7 months.

An examination of this age group table shows that for certain causes the majority of deaths occurred in certain age groups, for instance :—

Measles and whooping cough	90%	occurred under 5 years.
Diphtheria	91%	between 2 and 15 years.
Influenza	78%	over 45 years.
Cancer	92%	,, 45 ,,
Heart disease	94%	,, 45 ,,
,, ,, ...	71%	,, 65 ,,
Pneumonia	58%	,, 45 ,,
,, ...	27%	under 5 ,,
Acute and chronic nephritis	87%	over 45 ,,

Accidents as a cause of mortality.

In 1933, 51 fewer accidents occurred compared with the previous year. The same number of deaths due to vehicular traffic and cycles was, however recorded (40), giving a percentage of 3.95 of the total accidents.

The following table has been kindly supplied by the chief constable :—

1932	ACCIDENTS	Horse-drawn vehicles	Mechanically propelled vehicles				Pedal cycles	Total accidents, 1933
			Omni-buses and motor coaches	Tramcars and trackless trolley vehicles	Other vehicles	Total		
40	Fatal ...	—	1	1	28	30	10	40
1,063	Non-fatal	9	24	7	651	691	321	1012

The number of inquests, including deaths certified by the coroner after post mortem without an inquest, held at Bristol during the year was 381, eleven more than in 1932.

The tables which follow set out the principal causes of death in Bristol last year, classified according to the manual of the international list of causes of death in each quarter, in age groups, and in registration sub-districts.

Observations on the statistics relating to infant mortality and maternal mortality will be found in the section of this report dealing with maternity and child welfare.

1933.

Causes of death in quarters.

Total 1932		Disease.	Quarters. 1st	2nd	3rd	4th	Total 1933
2	1	Typhoid and paratyphoid fevers	—	—	—	2	2
2	2	Measles	5	7	1	1	14
3	3	Scarlet fever	2	1	1	—	4
31	4	Whooping cough	8	3	4	1	16
22	5	Diphtheria	9	2	5	6	22
154	6	Influenza	267	6	4	15	292
11	7	Encephalitis lethargica	—	3	1	2	6
11	8	Cerebro spinal fever	1	3	—	2	6
294	9	Tuberculosis of respiratory system	114	71	68	83	336
40	10	Other tuberculous diseases ...	14	17	12	11	54
20	11	Syphilis	7	4	1	5	17
23	12	General paralysis insane, tabes dorsalis	3	6	5	8	22
613	13	Cancer, malignant disease ...	149	159	128	148	584
50	14	Diabetes	16	17	11	12	56
253	15	Cerebral haemorrhage, etc. ...	83	68	43	61	255
1,060	16	Heart disease	370	244	214	328	1,156
17	17	Aneurysm	3	4	3	6	16
33	18	Other circulatory diseases ...	2	7	4	7	20
167	—	Arterio-sclerosis	52	45	36	50	183
185	19	Bronchitis	115	18	10	35	178
256	20	Pneumonia (all forms) ...	122	51	22	87	282
70	21	Other respiratory diseases ...	40	22	7	25	94
40	22	Peptic ulcer	6	6	6	3	21
55	23	Diarrhoea, etc.	12	10	11	8	41
32	24	Appendicitis	12	2	10	1	25
11	25	Cirrhosis of liver	4	1	3	3	11
11	26	Other diseases of liver, etc. ...	5	4	8	4	21
96	27	Other digestive diseases ...	34	21	20	24	99
202	28	Acute and chronic nephritis ...	59	40	38	44	181
4	29	Puerperal sepsis	3	1	1	5	10
12	30	Other puerperal causes... ...	3	5	4	4	16
168	31	Congenital debility, premature birth, malformations, etc. ...	49	45	34	60	188
142	32	Senility	40	26	30	43	139
64	33	Suicide	16	18	12	11	57
137	34	Other violence	41	32	34	45	154
319	35	Other defined causes	95	66	64	89	314
28	—	Rheumatic fever	10	3	5	2	20
4	36	Causes ill-defined or unknown	—	—	—	1	1
4,642		TOTAL ...	1,771	1,038	862	1,242	4,913
11.49		Death rate per 1,000	17.60	10.17	8.42	12.13	12.00

1933.

Causes of death at ages.

CAUSE OF DEATH.	Deaths in whole district at subjoined ages									Corrections made for transferable deaths.		Total deaths in Public Institutions.
	All ages	Under 1	1 and under 2	2 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards	Inward Transfers (+)	Outward Transfers (—)	
Certified	4912	306	53	73	99	182	504	1262	2433	95	434	1822
Uncertified	1	1	..	..	..	..	..	..	..	..	..	..
1 Typhoid and paratyphoid fevers ..	2	..	..	..	..	1	..	1	..	..	..	2
2 Measles	14	1	5	5	3	..	..	..	..	..	1	9
3 Scarlet fever	4	..	1	..	3	..	..	..	..	..	..	4
4 Whooping cough	16	10	4	2	..	..	..	..	..	..	1	10
5 Diphtheria	22	..	1	6	14	..	1	..	..	1	3	21
6 Influenza	292	3	5	1	5	8	43	87	140	4	12	47
7 Encephalitis lethargica	6	..	..	..	..	..	2	4	..	..	..	2
8 Cerebro spinal fever	6	4	1	..	1	..	..	..	..	..	1	6
9 Tuberculosis of respiratory system..	336	..	1	..	6	78	143	91	17	9	10	152
10 Other tuberculous diseases ..	54	6	2	9	11	11	10	4	1	2	10	37
11 Syphilis	17	3	..	..	..	..	6	8	1	1	4	8
12 General paralysis insane, tabes dorsalis	22	..	..	..	..	3	7	9	3	..	1	17
13 Cancer, malignant disease ..	584	..	..	2	..	2	40	250	290	8	85	237
14 Diabetes	56	..	..	..	1	2	3	17	33	1	9	22
15 Cerebral haemorrhage, etc. ..	255	..	..	..		..	5	74	176	2	12	87
16 Heart disease	1156		..	1	4	11	51	267	823	13	31	346
17 Aneurysm	16	..	..	..	..	..	3	6	7	..	..	6
18 Other circulatory diseases	203	..	..	..	..	..	2	40	161	3	6	37
19 Bronchitis	178	3	..	2	1	..	6	30	136	..	5	33
20 Pneumonia (all forms)	282	52	12	14	9	4	27	84	80	5	15	132
21 Other respiratory diseases ..	94	1	2	1	1	1	4	16	68	2	8	42
22 Peptic ulcer	21	..	..	..	..		4	11	6	..	9	14
23 Diarrhoea, etc.	41	25	6	2	..	..	..	4	5	2	5	28
24 Appendicitis	25	..	..	1	4	4	3	7	6	1	9	21
25 Cirrhosis of liver	11	..	..	..	..	..	2	3	6	..	2	1
26 Other diseases of liver, etc. ..	21	..	..	..	..	..	1	3	15	..	3	11
27 Other digestive diseases	99	2	3	..	4	4	10	34	42	3	25	53
28 Acute and chronic nephritis ..	181	..	..	..	3	6	14	60	98	3	17	67
29 Puerperal sepsis	10	..	..	..	..	2	7	1	..	..	6	8
30 Other puerperal causes ..	16	..	..	..	..	6	10	..	..	1	3	10
31 Congenital debility, premature birth, malformations, etc.	188	184	2	..	1	1	..	..	..	1	25	90
32 Senility	139	..	..	..	..	..	..	..	139	4	5	18
33 Suicide	57	..	..	..	..	2	17	30	8	5	4	11
34 Other violence	154	2	5	8	11	20	28	28	52	13	25	80
35 Other defined causes	334	11	3	19	17	16	56	93	119	11	81	152
36 Causes ill-defined or unknown ..	1	..	..	..	..	..	..	..	1	..	1	1
All Causes	4913	307	53	73	99	182	504	1262	2433	95	434	1822
Sub-entries included in above figures												
18a Arterio-sclerosis ..	183	..	..	..	..	..	2	39	142	3	4	32
35a Poliomyelitis	1	..	..	..	..	..	1	..	..	..	..	1
Erysipelas	8	2	..	1	..	..	1	1	3	..	2	5
Rheumatic fever ..	20	..	..	1	6	3	4	4	2	..	4	6

1933.

Causes of death in registration sub-districts.

CAUSE OF DEATH	DEATHS IN DISTRICTS AT ALL AGES.									
	All ages	Ashley	Bristol South	Bristol Central	Clifton	St. George	Stapleton	Westbury-on-Trym	Municipal Institutions (home unknown)	Port Cases
Certified	4,912	710	1,106	506	587	1,026	665	284	28	..
Uncertified	1	..	..	..	..	1	..	..	..	..
1 Typhoid and paratyphoid fevers ..	2	..	..	1	..	1	..	..	..	..
2 Measles	14	1	8	1	..	2	2	..	..	..
3 Scarlet fever	4	..	..	..	..	3	..	1	..	..
4 Whooping cough	16	4	5	2	2	..	2	1	..	..
5 Diphtheria	22	3	3	4	7	2	2	1	..	..
6 Influenza	292	28	80	35	32	85	23	9	..	..
7 Encephalitis lethargica	6	1	1	..	..	1	2	1	..	..
8 Cerebro spinal fever	6	..	3	1	..	2	..	..	..	..
9 Tuberculosis of respiratory system	336	36	73	37	30	86	56	17	1	..
10 Other tuberculous diseases	54	7	12	6	5	9	11	4	..	..
11 Syphilis	17	2	3	1	4	4	3	..	..	..
12 General paralysis insane, tabes dorsalis	22	4	5	2	1	3	4	1	2	..
13 Cancer, malignant disease	584	79	143	51	71	121	83	33	3	..
14 Diahetes	56	11	10	3	4	12	13	3	..	..
15 Cerebral haemorrhage, etc. ..	255	42	54	22	26	55	37	16	3	..
16 Heart disease	1,156	181	244	120	146	239	156	63	7	..
17 Aneurysm	16	2	5	1	4	2	2	..	..	..
18 Other circulatory diseases	203	44	34	27	27	41	22	8	..	..
19 Bronchitis	178	21	29	21	16	44	37	9	1	..
20 Pneumonia (all forms)	282	30	58	41	23	62	52	13	3	..
21 Other respiratory diseases	94	14	17	8	17	17	12	6	3	..
22 Peptic ulcer	21	3	5	4	1	5	3	..	..	..
23 Diarrhoea, etc.	41	3	10	6	2	7	7	6	..	..
24 Appendicitis	25	4	6	1	5	4	2	3	..	..
25 Cirrhosis of liver	11	3	2	..	..	3	3	..	..	..
26 Other diseases of liver, etc. ..	21	6	2	2	3	3	4	1	..	..
27 Other digestive diseases	99	17	24	8	18	15	9	7	1	..
28 Acute and chronic nephritis ..	181	20	40	16	31	38	21	15	..	..
29 Puerperal sepsis	10	1	4	1	..	2	..	2	..	..
30 Other puerperal canses	16	3	4	1	..	5	2	1	..	..
31 Congenital debility, premature birth, malformations, etc.	188	14	61	22	15	37	22	17	..	..
32 Senility	139	36	26	12	30	20	11	2	2	..
23 Suicide	57	10	16	2	8	9	6	5	1	..
34 Other violence	154	25	35	22	21	23	17	11	..	..
35 Other defined causes	334	55	84	25	38	65	39	27	1	..
36 Causes ill-defined or unknown ..	1	..	..	..	..	..	..	1	..	..
All causes ..	4,913	710	1,106	506	587	1,027	665	284	28	..
Sub-entries included in above figures										
18a Arterio-sclerosis ..	183	39	32	25	24	36	19	8	..	..
35a Poliomyelitis	1	..	1	..	..	..	..	..	..	..
Erysipelas	8	..	3	..	..	1	2	2	..	..
Rheumatic fever ..	20	4	4	2	1	5	3	1	..	..
Deaths of infants under 1		33	87	38	30	57	36	26	..	..

III.—GENERAL PROVISION OF HEALTH SERVICES.

Officers.

The public health officers of the authority have been enumerated as whole-time and part-time officers on page v. of this report, whilst the staffs of the various sections will be found at the commencement of their respective sectional reports. All officers of the local authority hold the requisite certificates or qualifications required for their appointments.

Laboratory facilities.

Since the 1st October, 1933, all pathological, bacteriological, chemical and research work required by the Corporation has been carried out by the University in the department provided and maintained by them under the medical officer of health as professor of preventive medicine. The University provides for a qualified member of the staff of the department to visit the Corporation hospitals and dispensaries to consult and advise and to assist in investigating epidemics and cases of food poisoning. The laboratory work is concentrated in commodious premises at Canynge Hall. The newly appointed city analyst will take up his duties at Canynge Hall in August as senior officer of the chemical section, whilst provision is made for him to remain directly responsible to the Corporation as regards his duties as public analyst.

I append a report by Professor I. Walker Hall, M.D., the director of the preventive medicine laboratory on the work of the new department for the city in 1933.

DEPARTMENT OF PREVENTIVE MEDICINE.

Report by Professor I. Walker Hall, M.D.,
Director Pathological Services.

The year has been characterised by the transfer of the routine bacteriology to a new department of preventive medicine instituted by the Univerity of Bristol. The medical officer of health has been appointed professor of preventive medicine in the university and Professor Walker Hall, who resigned his chair of pathology for the purpose, has become director of the preventive medicine laboratories. These two senior posts have become practical joint appointments of the city and university, so that a close connection between the academic laboratory and practical field hygiene has been favourably established.

Some of the inevitable changes and developments associated with the new arrangements may perhaps be worthy of reference.

Outfits for collection of specimens.

In order to facilitate the work of the medical practitioner it has been arranged that he is never without an available outfit, and whenever he sends in a specimen, a sterile outfit is returned to him with the report. Commencing therefore with a small surplus and able to have a sufficiency immediately dispatched for large outbreaks, he has not to ask and wait for a supply for his daily requirements.

Throat and nose swabs and sputa.

When submitting these for examination, the practitioner is requested to make them " primary " or " repeat." In the former case the swab is examined at once it reaches the laboratory and when positive, is telephoned to the doctor within an hour. If negative, the cultural result is telephoned before 10 a.m. the following morning. Repeat swabs are also then reported upon the cultural findings.

Serums and smears.

Serum from suspected typhoidal cases are dealt with when received and agglutination findings telephoned within three hours. Confirmation after twenty-four hours for " abortus " is made the next morning.

Serums for Wasserman reactions are put up on Monday, Tuesday, Wednesday, Thursday and Friday and the findings are ready for reporting at 4 p.m. For gonococcal antibodies, tests are carried out on Wednesdays and Fridays.

Smears from venereal areas are also subjected to rapid diagnostic methods, and the results are posted the same day. If desired earlier, the required information is given on enquiry by the practitioner.

Milk.

In addition to the routine work on milk for bacterial counts, etc., the laboratory has made provision for dealing with a largely increased number of milks submitted for detection of tuberculosis. Special care and attention is being paid to primary examinations, in order to lessen the period required for usual animal tests.

The main idea is, however, to focus all the resources of the laboratory on the problem of clean milk and to furnish such reports as will aid the producer to realise how, and to what extent, he may alter his methods to the advantage of himself and the community. The amount and constituents of dirt : the number and character of cells : the quantity and type of micro-organisms : the presence of pus or incidental materials are all observed and annotated.

Similarly, with regard to protective methods, such as pasteurization, detailed investigations are undertaken in order to furnish information of an advisory, or other, nature.

It is one of the essentials of pasteurization that local health authorities should exercise control over the efficiency of the pasteurizing machine. As a necessary addition to mechanical heat recorders, the preventive medicine laboratory has for some time been accumulating evidence and experience of the various tests and methods available for the evaluation of the efficiency of pasteurization manifested in milk delivered to the public. When, therefore, this process becomes more generally utilised, the laboratory is in a position at once to handle the problem in its wider aspects. Already it has contributed some useful findings for checking the safety of the present output, restricted though it is.

Rats.

It has been possible to increase the numbers of rats examined for plague and to record the incidence of epizootic conditions.

Port Sanitary Authority.

The facilities of the new department have enabled an extension of the investigations previously made. For instance, when the question arose of the use of a number of tins of preserved fruits, it was possible, not only to examine for the presence, type and viability of moulds and bacteria, but to carry out determinations of the contents of sugar and salts, and the comparative hydrogen concentration of the fluid portions. The total findings yielded a wider basis for final consideration and action.

City hospitals, sanatoria, dispensaries and clinics.

Southmead Hospital, Ham Green Hospital and Sanatorium, Frenchay Park Sanatorium, Stapleton and Eastville Institutions, Hortham Colony, Tuberculosis Dispensaries, Maternity and School Clinics have all now come under the purview of the work of the laboratory, and it has been necessary to establish a definite section of clinical pathology. The results are largely transmitted by telephone and confirmed by post.

A member of the staff visits the hospitals to collect materials and to confer with the medical officers when required.

Public assistance work.

In order to assist the medical practitioner in his diagnosis of cases suitable for removal to the public assistance hospitals or during his care otherwise, the laboratory carries out the examination of clinical material from patients who are definitely unable to pay the cost of the examinations. The recommendation of the practitioner accompanies such specimens and is accepted as the authority for the work. The staff is prepared to discuss the pathological aspects of the case with the practitioner. In no case, however, except in the laboratory tests for the diagnosis of notifiable infective conditions, does the department undertake work which lies within the province of the practising pathologist.

PATHOLOGICAL, BACTERIOLOGICAL AND CHEMICAL EXAMINATIONS, 1933.

Nature of specimen or sample examined.	At Bristol University Laboratory	At City Laboratories	Total
SWABS for—			
Diphtheria	3,341	8,885	12,226
Puerperal fever	7	—	7
Scarlet fever	87	—	87
Cerebro-spinal fever	3	—	3
VIRULENCE tests	34	—	34
SPUTUM for T.B., etc.	166	531	697
PUS for—			
T.B.	2	—	2
General bacteriology	11	—	11
Plague	2	—	2
HISTOLOGY			
Tissues	16	—	16
FAECES			
General	3	—	3
Special bacteriology	47	—	47
Chemistry	1	—	1
URINE			
General	17	—	17
Special bacteriology	8	—	8
BLOOD			
Counts	4	—	4
Serum agglutinations	41	—	41
Cultures	8	—	8
Chemical	29	—	29
Films for malaria	1	—	1
FLUIDS			
Pleural or gastric	14	—	14
C.S. Fluid	14	—	14
VACCINES prepared—			
Autogenous	1	—	1
General doses	600	—	600
MILK			
Grading counts, etc.	67	—	67
Tuberculosis, etc.	331	—	331
Pasteurisations	57	—	57
V.D. EXAMINATIONS—			
Bacteriology	2,048	—	2,048
Serology	2,270	—	2,270
MEAT			
Carcase of pig	1	—	1
RATS for plague	599	—	599
POST MORTEM on seagulls	1	—	1
Examination of soldered tins of pineapple	1	2	3
Examination of cocoa beans	1	—	1
FOOD and DRUGS, miscellaneous ...	—	1,370	1,370
FERTILIZERS and FEEDING STUFFS ...	—	23	23
RAG FLOCK	—	4	4
WATER	—	16	16

Ambulance facilities.

Service by	Infectious cases.	Non-infectious cases
Health Committee	2,278	—
Public Assistance Committee ...	—	*3,704
City and Marine Ambulance Corps	—	5,682
St. John's Ambulance Corps ...	—	7,435
TOTAL ...	2,278	16,821

* To 31st March, 1933.

There are no changes in the arrangements for the transport of infectious, non-infectious, accident and maternity cases to record.

Bristol is well served in the matter of ambulance facilities. Arrangements for the removal of infectious and maternity cases at all hours, are made through the public health office. Maternity cases are, by arrangement with the Public Assistance Committee, removed in ambulances owned by that committee. Non-infectious and accident cases are handled by the Bristol City and Marine Ambulance Corps, and by the St. John's Ambulance Corps, and both corps provide night and day service. During the past year these public ambulance services removed 19,099 cases to hospital.

Nursing in the home.

The arrangements for nursing the sick in their homes is provided in Bristol solely by private societies and institutions as detailed in my report for 1930. Since August, 1931, the Health Committee has made grants of 25/- per case to the Bristol and Clifton District Nurses Society for nursing approved cases of tuberculosis in their own homes. During the year the society undertook the nursing of 29 cases making a total of 78 cases nursed since the arrangement began.

Clinics and treatment centres.

Clinics.	School medical	Maternity and child welfare.	Tuberculosis.	Venereal disease.	Voluntary
General— ...	6	—	1	—	5
Cardio-rheumatic	1	—	—	—	—
Skin diseases ...	1	—	—	—	—
Orthopaedic ...	—	—	1	—	—
Artificial sunlight ...	1	1	1	—	—
Diphtheria immunisation ...	1	1	—	—	—
Ante-natal ...	—	10	—	—	—
Post-natal ...	—	1	—	—	—
Infant welfare ...	—	3	—	—	22
Mothercraft ...	—	1	—	—	—
Backward children	—	1	—	—	—
Venereal disease ...	—	—	—	1	—
Radium centre ...	—	—	—	—	1

In addition, there are out-patient and casualty departments attached to all the voluntary general hospitals.

The *school medical inspection clinics* provide for the treatment of minor ailments, ear, nose and throat diseases, zinc ionisation, dental treatment, refraction work, X-ray treatment, massage and electrical treatment and remedial exercises. The *maternity and child welfare clinics* provide, in addition to the main types of antenatal and post-natal clinics, sessions for artificial sunlight radiation, lactation problems and for the backward child. Minor ailments, rickets, dental troubles and eye diseases in children under five years of age are referred to the Education Committee's school clinics. The *tuberculosis dispensaries* are equipped with X-ray apparatus and artificial sunlight plant.

Hospitals.

My report for 1930 contained a full list of hospitals (other than private hospitals) in the area, together with the type of case treated and accommodation available. There are no material changes in the hospital services to report except the replacement by permanent buildings of the temporary wooden buildings at Ham Green Sanatorium and alterations to one of the existing blocks. The new wards and alterations provide accommodation for 75 patients and the new nurses' home for a staff of 80. These buildings have been completed during the present year and will be officially opened in July by Sir Arthur Robinson, secretary of the Ministry of Health.

The reports of the medical superintendents of the municipal hospitals for 1932 will be found in section ix. The following table gives an idea of the work of the voluntary hospitals :—

HOSPITAL.	Total no. of beds.	Average no. occupied	No. of in-patients	No. of out-patients
Bristol Royal Infirmary ...	426	372.7	9,083	68,552
Bristol General Hospital ...	273	256.7	5,470	37,411
Bristol Royal Hospital for sick children and women ...	120	73.3	1,242	4,856
Cossham Memorial Hospital	90	62.8	1,221	1,451
Bristol Homoeopathic Hospital	77	56.0	1,183	17,200
Bristol Eye Hospital ...	45	34.68	718	13,954
Bristol Maternity Hospital and Temporary Home ...	32	8.44	221	—
Walker Dunbar Private Hospital for women and children	30	18.0	253	3,701

For the purpose of section 13 of the Local Government Act 1929, the Bristol Hospitals Council has been recognised by the Council, and this body is consulted on questions affecting hospital provision in Bristol. The Bristol Hospitals Council which was formed in 1929, includes the Lord Mayor, the Vice-Chancellor of the University (as chairman) and representatives of all voluntary hospitals as well as the Health and Public Assistance Committees. The medical officer of health is also a member ex-officio.

Local Government Act 1929.

My report for 1930 detailed the services transferred under the provisions of the Local Government Act and delegated to the Health Committee under the administrative scheme approved by the Council. There have been no amendments of the scheme as approved by the Ministry of Health since 1930, although there are some points under consideration at the present time.

Poor Law Medical Out-relief.

There has been no change in regard to the policy of medical out-relief which is under the Public Assistance Committee since its transfer to the Council. The medical staff remains as described in 1930, under the general direction of the medical officer of health. Cases requiring hospital treatment are admitted to Southmead Hospital.

Mental deficiency.

Staff.

Certifying medical officers—

Dr. A. A. Dalby }
Dr. A. F. Alford } under Education Act, 1921.
Dr. D. Hall Beatson ... under Mental Deficiency Act, 1913.
Supervising officer ... Mr. W. E. Price.
Domiciliary visitors, 2 ; clerks, 1.
Medical superintendent, Hortham Colony ... Dr. W. Wyatt.
Occupation Centres : Supervisors, 9 (five part-time) , housekeeper, 1.

In Bristol, feeble-minded mental defectives are under the care of three committees, i.e., the Mental Hospital Committee, the Mental Deficiency Committee and the Public Assistance Committee. The desirability of co-ordinating the medical services relating to the present and future mental work has been discussed by the Council on several occasions during the past few years. In March 1933, a special committee consisting of three members of each committee concerned with an independent person as chairman was appointed to consider and report on :—

(*a*) the desirability of merging of the Mental Deficiency Acts Committee and the Mental Hospital Committee.

(*b*) the closer co-ordination of the mental services of the city, particularly in regard to the management of all institutions for mental patients.

This committee has reported (*a*) that it can see no advantage in transferring the functions of the Mental Deficiency Acts Committee to the Mental Hospital Committee or vice-versa, and (*b*) that meetings of a joint committee composed of representatives of the three committees will, if regularly maintained, ensure effective co-operation and remove difficulties.

Institutional provision for the care of mental defectives.

Full details of the work of the local authority in connection with the care of mental defectives were given in my report for 1930. Changes and developments which have occurred in this service are referred to in the appended reports by the supervising officer for mental deficiency, (Mr. W. E. Price) and by the medical superintendent of Hortham Colony (Dr. W. Wyatt).

Report by Mr. W. E. Price, Supervising Officer.

Summary of cases dealt with by the Mental Deficiency Acts Committee.

	1st January, 1934.	1st January, 1933.
Institutions ...	497	467
Supervision ...	764	715
Guardianship ...	49	49
Pending ...	8	10
	1,318	1,241

Cases in institutions, 1st January, 1934.

	Males	Females	Licence		Total
			M.	F.	
Hortham Colony ...	172	150	6	13	341
Stapleton	49	47	3	4	103
Chasefield	—	4	—	—	4
Hermitage	—	2	—	—	2
Stoke Park ...	1	5	—	—	6
Eagle House ...	—	1	—	—	1
St. Mary's Home	—	1	—	—	1
Besford Court ...	3	—	—	—	3
Dovecot	—	1	—	—	1
Walsham How Home	—	—	—	1	1
Shirley	—	1	—	—	1
Rampton	8	9	—	1	18
Royal Fort ...	—	10	—	5	15
TOTALS ...	233	231	9	24	497

The work of the Mental Deficiency Acts Committee for the year 1933 has continued as usual. Beyond the annual increase in the number of cases dealt with, and consolidating the changes made in 1932, there is little to call for comment.

The following table may be of interest for it shews the annual rate of ascertainment of cases of mental defectives in this city during the last five years :—

1929	103
1930	102
1931	118
1932	121
1933	92

On the 1st January, 1934, the number of cases under order of detention was 546, of these 497 cases were detained in institutions and 49 under "guardianship" outside institutions. Of the cases on the books of institutions, 33 were on trial in the care of approved people or in non-custodial institutions being assisted in preparation for discharge.

The total number of cases dealt with during the year is 92 of whom 28 were sent to institutions, two placed under "guardianship," and 62 remained in their own homes under supervision. This compares with 121 cases for 1932, of whom 44 were sent to institutions, six placed under "guardianship" and 71 remained in their own homes under statutory supervision.

Licence for trial outside the institutions was granted in 45 instances, being 14 males and 31 females, of these three males and three females were returned to the institution having failed on licence. This compares with 46 cases granted licence in 1932, when there were five failures.

There are two special schools in Bristol administered by the Education Committee and dealing with the educable and mentally defective children. One is Redcross St. special school and the other is Orchard Place special school. If a pupil reaches a stage when it is decided that he can receive no further benefit from education in a special school or class, or has become unfit to associate with the other children of the school he is reported to the Mental Deficiency Acts Committee and the responsibility for his future welfare is removed from the care of the Education Committee to that of the Mental Deficiency Acts Committee. During 1933, 51 of these cases were notified of whom 12 were sent to institutions and 39 placed under statutory supervision. This compares with 56 cases notified in 1932 and 19 sent to institutions.

Of an institution population of 443 there have been eight deaths during the year, seven of which occurred during the first half of the year.

Of the total number of cases known to the committee, there have been three marriages, two males and one female. There has been one child born to an unmarried mentally defective mother and two children to mentally defective married mothers.

There has been no change in the administrative details of the *occupation centres* following the transfer of these centres from the Association of Mental Welfare to the Local Authority on 1st April, 1933. Much has been done to bring the premises and general arrangements up to the standard asked for by the central authority but further progress is delayed for reasons of economy. Occupation centres are really an important part of the social work of the committee and much could be written of the benefit to patients and parents and of economy to the community.

There are four occupation centres but the juvenile centre which was previously run at Lewin's Mead is now removed to 15 Park Row. Particulars of the centres are as follows :—

Centre	Trainees		Sessions.
	type	no.	
Redfield Industrial	Adult females	19	Tuesday, Wednesday, Thursday and Friday from 2 to 4 p.m.
Bedminster Industrial	Adult females	8	Tuesday, Wednesday and Thursday from 2 to 4 p.m.
PARK ROW. Industrial	Adult males	40	Daily except Saturday, 10 a.m. to 4 p.m.
Juvenile	Low grade children and a few adult females.	18	Daily except Saturday, 9.30 a.m. to 3.45 p.m.

HORTHAM COLONY.

Report by Dr. W. Wyatt, Medical Superintendent.

STATISTICS at 20th February, 1934	M.	F.	T.
Number of patients in residence ...	261	243	504
,, ,, on licence ...	8	16	24
,, ,, on leave, etc.	4	5	9
,, ,, on books ...	—	—	—
TOTALS	273	264	537

Total admissions since opening of colony—575.

Local Authorities.

Bristol	342
Bath	29
Dorset	122
Cardiff	29
Lincoln	1
Wilts	3
Monmouth	1
Warwick	8
Gloucester	1
Hereford	1
	537

There have been no structural alterations or additions of sufficient importance to note in the report.

The industries for patients include :—

Bootmaking
Brushmaking
Matmaking
Carpentry
Tailoring
Gardening
Farming
Engineering
Baking
Painting

Domestic work
Laundry work
Kitchenwork
Needlework
Rugmaking
Handicrafts
Stocking machine

The occupation centre for trainable children is now organised and approximately 120 children attend daily. Regular mental tests are part of the routine examination of patients and during last year approximately 700 tests were carried out.

Health education.

During the year the public health staff continued to give health lectures and demonstrations on problems dealing with public health to social, religious and political organisations, and meetings were addressed in addition to the usual lectures at the mothers' schools, clinics, etc.

In every possible way due prominence was given to constructive health work and preventive measures necessary to combat disease, in order to improve the general standard of health of the people.

Until its withdrawal by the publishers, the department continued the distribution of a local edition of 3,000 copies of the journal " Better Health " which contained each month a supplementary page supplied by the department dealing with matters of special local interest or importance.

The Health Committee also made a grant of £10 to the Bristol Infant Welfare Association towards the expense of an exhibition of the new travelling exhibit from the National Council of Maternity and Child Welfare during health week.

IV.—MATERNITY AND CHILD WELFARE.

Staff.

Chief assistant medical officer ...	M. G. Hughes, M.B., Ch.B.
Assistant medical officer	G. Hartley, M.D., M.M.
,, ,, ,, ...	A. A. Craig, M.B., B.S., D.P.H.
,, ,, ,, (part-time)	L. A. Baker, B.A., M.B., B.Ch., F.R.C.S.I.
,, ,, ,, ,,	D. M. Pullen, M.B., Ch.B.
,, ,, ,, ,,	H. L. Shepherd, Ch.M., M.B.
Principal sister ... ... (also superintendent school nurse)	Miss L. Elkins.
Inspector of midwives and nursing homes	Miss W. M. Richards.
Superintendent health visitor ...	Miss I. M. Ralph
Secretary, boarding-out committee	Miss G. E. Nicholls.
Welfare Worker	Mrs. N. H. Stott.

Health visiting staff, 24; clerks, 6.

There has been no change in the local scheme for maternity and child welfare which remains, as previously reported, one of partnership between municipal and voluntary enterprise The Bristol Infant Welfare Association co-ordinates the work of the voluntary associations providing maternity and child welfare services with those organised and maintained by the local authority. The scheme approved under the Local Government Act, 1929, secures the payment of grants towards the expenses of these voluntary associations during the fixed grant period ending 31st March, 1937, amounting to £6,146 14s. 1d. per annum, subject to such services being maintained efficiently to the satisfaction of the Council. The schedule of grants provides for the payment annually of £2,536 13s. 7d. towards the expenses of four homes for mothers or babies; £925 2s. 5d. to two day nurseries; £1,574 19s. 3d. to the Bristol Infant Welfare Association, and £1,109 19s. 4d. to 20 voluntary infant welfare centres.

Infant mortality.

During the year the deaths of 307 infants under one year of age were recorded, or five less than the net deaths registered in 1932.

This figure gives an infant mortality rate of 54.90 per 1,000 births, or 3.5 per 1,000 more than the rate last year. The rate for England and Wales was 64 per 1,000 births and 67 for all county boroughs.

Fluctations from year to year are of course inevitable in a rate so sensitive as the infant mortality rate The rate this year is still over 6 per 1,000 births below that for the quinquennium 1926/30 and 56 per 1,000 below that for 1911/15. Moreover, the rate consistently remains lower than the rate for England and Wales, and the table on page 16 shows that Bristol had one of the lowest infant mortality rate of the eleven largest industrial towns.

The principal causes of infant deaths in order of numerical importance were prematurity (40), pneumonia (52), congenital malformation (34), diarrhoea and enteritis (26), injury at birth (14), whooping cough (10), atrophy, debility and marasmus (9), and atelectasis (8). This order of precedence is practically the same as last year, except that deaths due to injury at birth have this year to be included in the list as a principal cause.

The group of diseases covered by such causes as prematurity, malformations and injury at birth accounted for 57 per cent. of the total infant deaths, followed by respiratory diseases, 18.9 per cent., and diarrhoea and enteritis, which up to 1915 occupied a high position amongst causes of infant mortality, 8.5 per cent, a decline of 1.1 per cent. over the figure for 1932 in spite of the hot weather experienced last summer.

As in previous years, more than one half (55.4 per cent.) of the deaths of infants occurred under one month—a neo-natal mortality rate of 30.4 per 1,000 births compared with 26.05 last year. Of these deaths in the first month, 31.2 per cent. occurred on the first day of life and 32.4 per cent. in the first week. Approximately 87 per cent. of the neo-natal deaths were due to prematurity and other congenital defects.

Death rate of illegitimate infants.

Of the 194 illegitimate births registered during the year, 14 or 7.8 per cent. died before reaching the age of one year which is equal to an illegitimate infant mortality rate of 87.6 compared with 64.5 in 1932. The legitimate rate per 1,000 legitimate births was 53.7.

Maternal mortality.

Last year we were able to record the lowest maternal mortality rate since 1924. In 1933, this position was virtually reversed. No fewer than 26 Bristol mothers died from causes directly connected with childbirth—10 more than in 1932—and we have to record the high maternal mortality rate of 4.44 per 1,000 total births, a rate which has only once been exceeded in the preceding fourteen years. Ten of the deaths, representing 1.71 per 1,000 total births, were due to puerperal infections. The corresponding figures for England and Wales are practically identical, viz. : 4.23 and 1.71 per 1,000 total births respectively.

Investigation into the causes of maternal deaths and puerperal fever or puerperal pyrexia is carried out by the medical officers of the maternity and child welfare section. Since 1928 the results of these enquiries have been forwarded to the Ministry of Health.

The committee have provided all the facilities set out in memorandum 156/M.C.W. with the exception of home helps, a scheme for which has not been adopted in this city.

Altogether there are ten municipal ante-natal clinics, where expectant mothers may obtain advice, both medical and social. Arrangements have been made for the systematic following up of patients attending the clinic. The women are also advised to attend for examination after confinement.

The services of consultants in cases of difficult labour and puerperal fever are at the disposal of any doctor when required, and an arrangement has been made with the Bristol General Hospital for the admission of cases of complicated labour, if necessary.

Arrangements have been made for the pathological examination of material submitted by doctors.

There is adequate provision for patients needing institutional treatment on medical grounds, and also on account of unsatisfactory home conditions.

In addition to the work of midwives in private practice, confinements are taken by the extern staffs attached to the Bristol Royal Infirmary, Bristol General Hospital and Southmead Hospital. This gives an adequate supply of district midwives.

Sterilised maternity outfits are supplied to patients at cost price, and milk is supplied to necessitous expectant and nursing mothers on the recommendation of the medical officer of a clinic or infant welfare centre.

1933.

INFANT MORTALITY.

Deaths from stated causes under ONE year.

Total 1932	CAUSE OF DEATH	Under 1 Day	Under 1 Week	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total under one month	1-2 Months	2-3 Months	3-4 Months	4-5 Months	5-6 Months	6-7 Months	7-8 Months	8-9 Months	9-10 Months	10-11 Months	11-12 Months	Total 1933	Deaths in Quarters 1st	2nd	3rd	4th
...	Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	Chicken-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	...
...	Scarlet fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	Whooping cough	...	...	...	...	1	1	1	...	...	...	1	1	2	2	...	1	1	10	5	1	3	1
...	Diphtheria and croup ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	Erysipelas	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	2	...	...	...	2
3	Tuberculous meningitis ...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	1	2	6	4	2	...	...
...	Abdominal tuberculosis ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	Other tuberculous diseases ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	Meningitis (not tuberculous) ...	...	...	...	...	...	...	...	1	2	...	1	1	...	1	...	...	...	6	1	3	...	2
7	Convulsions	...	2	...	...	...	2	...	2	...	...	1	...	...	...	...	...	...	5	2	2	1	...
..	Laryngitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Bronchitis	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	1	3	1	...	2	...
47	Pneumonia (all forms) ...	...	3	2	2	1	8	3	5	6	3	1	5	6	1	1	8	5	52	19	8	2	23
4	Influenza	...	...	...	1	...	1	...	...	1	1	...	...	...	...	...	...	...	3	2	...	...	1
5	Diarrhoea	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	2	...	...	2	...
25	Enteritis	...	1	...	1	...	2	4	1	2	4	5	1	2	1	...	...	2	24	7	7	5	5
...	Gastritis	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	1
5	Syphilis	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	3	2	...	1	...
1	Rickets	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	Found dead	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	Suffocation, overlaying ...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	2	1	...	...	1
8	Injury at birth	8	2	2	2	...	14	...	...	...	...	...	...	...	...	...	...	...	14	2	5	2	5
12	Atelectasis	5	1	1	1	...	8	...	...	...	...	...	...	...	...	...	...	...	8	1	4	3	...
43	Congenital malformations ...	4	9	5	3	...	21	3	2	2	...	...	1	1	2	...	1	1	34	9	7	8	10
79	Premature birth	35	32	15	10	10	102	6	2	...	...	...	...	...	...	...	...	...	110	28	20	20	42
13	Atrophy, debility & marasmus	...	1	...	2	...	3	2	1	1	1	1	...	...	...	...	...	...	9	3	4	...	2
19	Other causes	1	4	1	1	1	8	...	1	..	...	...	...	1	...	...	1	1	12	6	4	1	1
312	Totals	53	55	26	23	13	170	20	18	15	9	12	14	14	9	1	12	13	307	93	68	50	96

MATERNAL MORTALITY.

Total 1932	Cause of death	Total 1933	Age groups 15 and under 25	25 and under 45	45 and under 65	Deaths in institutions	Deaths in districts Ashley	South	Central	Clifton	St. George	Stapleton	Westbury-on-Trym
3	Puerperal sepsis ...	5	1	4	...	4	...	2	...	...	2	...	1
1	Septic abortion ...	5	1	3	1	4	1	2	1	...	...	...	1
...	Other puerperal causes	...	...	...	...	...	...	...	...	...	...	...	...
1	Placenta praevia ...	3	1	2	...	2	...	...	...	...	2	1	...
1	Post-partum haemorrhage ...	2	1	1	...	1	1	1	...	...	...	...	...
1	Obstetric shock ...	3	1	2	...	1	1	...	...	...	1	1	...
3	Do. Caesarean section	1	...	1	...	1	...	...	1	...	...	...	...
1	Ruptured uterus ...	...	...	...	...	...	...	...	...	...	...	...	...
1	Embolism	3	1	2	...	2	1	1	...	...	1	...	...
2	Ruptured ectopic gestation	...	...	...	...	...	...	...	...	...	...	...	...
1	Intestinal obstruction —caes. sect. ...	...	...	...	...	...	...	...	...	...	...	...	...
1	Puerperal toxaemia ...	4	2	2	...	3	2	...	...	...	1	...	1
16	Total ...	26	8	17	1	18	6	6	2	...	7	2	3

RATES.

Infant Mortality	Males	Females	Total	Rate per 1,000 births.
Legitimate ...	163	127	290	53.7
Illegitimate	8	9	17	87.6
Total	171	136	307	54.90

Maternal Mortality.	No.	Rate per 1,000 total births
Puerperal sepsis ...	10	1.71
Other puerperal causes	16	2.73
Total... ...	26	4.44

MATERNITY AND CHILD WELFARE SERVICES.

Report by Marguerite G. Hughes, M.B., Ch.B.,
Assistant Medical Officer of Health.

1932	STATISTICS	1933
135	Midwives giving notice of practice	140
3	Bona-fide midwives registered	3
57	Midwives in private practice	50
78	Midwives attached to institutions	90
1,097	C.M.B. Forms A—medical help	973
30	B—death	21
78	C—stillbirth	86
4	D—laying out the dead	10
39	E—liability of infection	35
67	F—artificial feeding	58
9	Midwives' claims for compensation	11
331	Fees claimed by medical practitioners	267
	NOTIFICATIONS received—	
6,287	Live births	5,863
263	Stillbirths	287
14	Puerperal fever	5
44	Puerperal pyrexia	45
40	Ophthalmia neonatorum	35
	FORMS OF CONFINEMENT ASSISTANCE GRANTED—	
649	Maternity beds	763
94	Midwife's fee	119
82	Southmead Hospital district nurse	63
22	Consultant obstetrician	28
7,238	Milk grants	3,584
13,756	Attendances at municipal ante-natal clinics	13,716
2,721	New patients	2,663
21.5	Average per session	21.3
70,161	Attendances at infant welfare centres	63,801
35,274	Children under one year	31,039
34,887	Children between one and five years	32,762
6,001	Attendances at artificial sunlight clinic	4,275
4,361	,, mothercraft clinic	3,973
454	,, minor ailment clinics	443
2,371	,, dental clinics	2,625
	Home visits by health visitors	134,700

Midwifery and maternity services.

The number of *midwives* giving notice of intention to practice in the area increased by five to a total of 140 during 1933, of whom 50 were in private practice, and 90 attached to institutions. The number of bona-fide midwives has now been reduced to three.

Each midwife in private practice was visited by the inspector of midwives at her house at least four times, as in previous years, when the registers, bag, etc., were inspected. No midwives were interviewed by the medical inspector, or reported to the Central Midwives Board.

During the year, 1,182 *C.M.B. forms* were received from midwives, 973 being for medical help at confinement.

The following table indicates the nature of the conditions for which medical help was called in :—

1932	Condition	1933
3	Threatened abortion	4
7	Abortion	7
11	Albuminuria	13
11	Prematurity	15
34	Ante-partum haemorrhage	33
135	Delayed labour	111
8	Complicated labour	19
280	Ruptured perineum	254
26	Adherent placenta	16
18	Post-partum haemorrhage	21
39	Raised temperature	44
27	Feebleness of child	20
246	Discharging eyes...	202
7	Rash	10
245	Other causes	204
1,097	Total ...	973

Nine *claims for compensation* were received from midwives for loss of cases referred from ante-natal clinics to an institution for confinement on account of some abnormality, two midwives were also compensated for loss of practice owing to a slight outbreak of pemphigus neonatorum.

The *claims for medical fees* made by practitioners for attendance at confinements when called in by midwives amounted to 267 ; this is a decrease of 64 compared with 1932.

The Public Health (Notification of Puerperal Fever and Puerperal Pyrexia) Regulations, 1926.

Five notifications of puerperal fever (not including two deaths certified from puerperal fever) and forty-five notifications of puerperal pyrexia were received during the year, compared with 14 cases of puerperal fever and 44 cases of puerperal pyrexia during 1932.

The attack rates per 1,000 total births (i.e., live and still-births registered) were .68 for puerperal fever and in the case of puerperal pyrexia 7.9.

Under the scheme for assistance in cases of complicated labour, puerperal fever and puerperal pyrexia, 28 cases were referred to consultants. There was no application for provision of nursing in the home.

Public Health (Ophthalmia Neonatorum) Regulations, 1926.

Year	Notifications	Treated		Recovered (vision unimpaired)	Lesser injury to sight	Blindness		Death before recovery	Result unknown at end of year	Live births notified	Cases per 1,000 live births
		at home	in hospital			both eyes	one eye				
1928	37	29	8	33	nil	nil	1	nil	3	6,554	5.6
1929	25	22	3	25	nil	nil	nil	nil	nil	6,270	3.9
1930	19	15	4	18	nil	nil	nil	1	nil	6,532	2.9
1931	22	18	4	19	nil	nil	nil	nil	3	6,300	3.4
1932	40	36	4	40	nil	nil	nil	nil	nil	6,287	6.3
1933	35	34	1	35	nil	nil	nil	nil	nil	5,863	5.9

Thirty-five notifications of ophthalmia neonatorum were received during 1933. Each case was visited on the day of receipt of notification, as in previous years. In no case was any impairment of vision reported to follow the disease.

The same care and attention has also been given to less serious eye cases reported by midwives and district health visitors, and during 1933 the number of cases dealt with was 279, involving 1,303 visits. The number of "A" forms sent in for medical help for eye discharges was 202.

Ante-natal and post-natal work.

There have been no additions to the number of municipal clinics during 1933 ; altogether there are ten ante-natal clinics and one post-natal clinic, and 13 sessions are held each week including an ante-natal clinic held at the Bristol General Hospital, towards which a grant continues to be made. Ante-natal clinics are also held at the Bristol Royal Infirmary and Bristol Maternity Hospital.

The total number of attendances at the municipal clinics during the year was 13,716, including 2,663 new patients, making an average attendance per session of 21.3. These figures are slightly lower than the previous year, due to the temporary closing of the Fishponds ante-natal clinic for re-building. This clinic has now been re-opened.

Sterilised *maternity outfits* are sold at cost price to expectant mothers attending the clinics, and maternity bags have been lent to a number of mothers.

During the year 119 *applications for assistance* towards payment of the midwife's fees at confinement have been dealt with, as well as 63 applications for the services of the Southmead Hospital district nurses. In addition, 763 applications for admissions to hospital for confinement were received.

During the year, 3,584 *milk grants* have been made ; to expectant mothers, 359 ; nursing mothers, 1,051 ; children under 3 years, 1,915, and children between 3 and 5 years, 223, at a total cost of £1,567 4s. 5d.

Institutional provision for mothers and children.

The number of *maternity beds* available in the city at the end of 1933 was 139.

During the year 621 patients were admitted to Southmead Hospital for confinement, of whom approximately 40 per cent. either offered to pay or were assessed to pay the full cost of maintenance, the remainder being granted assistance towards the cost.

Clinics and treatment centres.

There has been no increase in the number of infant clinics and treatment centres during the year, either municipal or provided by the Bristol Infant Welfare Association and Council of Schools for mothers.

First attendances at these clinics and centres included 2,269 children under one year and 760 children between the ages of 1—5 years, the total attendances of these groups being 31,039 and 32,762 respectively.

Four sessions per week are held at the artificial sunlight clinic, and during the year 385 new patients have received treatment ; the total number of attendances were 4,275. In the majority of cases very considerable improvement in the condition of the children has been reported.

Four sessions each week are held at the *mothercraft* (*infant feeding*) *clinic* for infants in whom unsatisfactory conditions have arisen as a result of wrong or mismanaged feeding. The health visitor specially trained for this work, has, in addition to attendance at the clinic, paid 223 visits during the year, and has also given 30 lectures at infant welfare centres. The number of new patients attending during the year was 443, and the total number of attendances 3,973, giving an average attendance per session of 21 (approx.)

Cases of *minor ailments* in children under the age of five are referred to the Education Committee for treatment at the school clinics, and 443 children received treatment during the year.

Dental treatment for nursing and expectant mothers and children up to the age of five years is carried out at the school clinics, and at the clinic at Southmead Hospital. The total number of new cases treated during the year are : expectant mothers, 89 ; nursing mothers, 141 ; and infants, 752 ; and the number of attendances for treatment : expectant mothers, 225 ; nursing mothers, 453 ; and infants, 1,947. The cost of this service (including £430 18s. 6d. for dentures) amounted to £854 13s. 6d.

The institutional provision for *unmarried mothers, illegitimate infants and homeless children* remains as described in previous years.

Nurseries.

The medical supervision of the *St. Werburgh's nursery school* and *Castle Green nursery class*, continues to be carried out by the maternity and child welfare department. An artificial sunlight lamp has recently been installed at the nursery class.

A report on the work done at these nursery classes is included in the school medical officer's report.

There has been no addition to the number of *day nurseries* during the year.

Diphtheria immunisation.

The number of children immunised against diphtheria during the year at the clinic at 7, Brunswick Square, was 131, and the total attendances, 820.

Health visitors.

There has been no increase in the health visiting staff during the year, and the duties remain as described in previous reports. The total number of visits paid by health visitors was 134,700, an increase of 8,147 on 1932.

A *training course for health visitors* was again held during 1933. Thirteen students entered for the course, including one health visitor and one tuberculosis dispensary nurse: all but one were successful in obtaining the diploma of the Royal Sanitary Institute.

Infant life protection.

Systematic visiting under the Children Acts 1908 to 1933 has been carried out as in the previous year. At the end of the year the total number under supervision was 217, and the number of persons on the register as receiving children was 192. This is an increase over previous years, owing to the age for supervision being raised to nine years.

Orthopaedic treatment.

The importance of visiting children under five years of age in their own homes is emphasised by the fact that during the year forty children have been referred to the school clinics for crippling defects (rickets, etc.), and nine children requiring operative and other treatment have been admitted to hospital.

Notification of Births Act, 1915.

During the year 6,150 notifications of births including 287 stillbirths were received under this Act, 1,101 being notified by doctors, 4,610 by midwives, and 439 by relatives.

The sex of the cases was :—males, 2,988 living, 146 dead; females, 2,875 living, 141 dead.

Comparative table of notified births.

Year	Births in Southmead Hospital		Births in other institutions and nursing homes.		% of births in all institutions to total births.	% attended by doctors.	% attended by midwives.
	Living	Dead	Living	Dead			
1922	52	6	1,026	48	14.4	28.3	57.3
1923	73	3	1,198	83	17.6	26.3	56.1
1924	77	2	1,344	81	20.5	24.5	55.0
1925	67	3	1,353	99	21.1	24.1	54.8
1926	102	3	1,552	101	24.8	23.1	52.1
1927	124	5	1,681	107	28.5	22.7	48.8
1928	123	2	1,757	116	29.2	23.4	47.4
1929	232	18	1,685	101	31.1	22.3	46.6
1930	406	11	1,627	113	31.7	23.6	44.7
1931	450	21	1,623	93	33.3	23.4	43.3
1932	524	20	1,855	127	38.5	21.5	40.0
1933	591	35	1,893	130	43.07	20.3	36.63

Stillbirths.

Investigation into the causes of the 287 stillbirths notified has been made as in previous years by medical officers of the department.

The Nursing Homes Registration Act, 1927.

Four applications for registration under the Nursing Homes Registration Act, 1927, have been considered during the year. Three of these were approved, and one refused ; an application for the transfer of registration was also refused. Two applications for the cancellation of the registration certificate were also received.

Maintenance of Destitute Children.

Staff.

CHILDREN'S HOMES :—

Visiting medical officer ...	J. A. L. Roberts, M.B., B.S.
,, ,, ,, ...	E. V. Foss, M.B., Ch.B.
Superintendent and matron	Mr. & Mrs. W. E. Twaits.

Assistant superintendent, 1 ; foster mothers and reliefs, 22 ; foster father, 1 ; domestic staff, 15.

BABIES' HOME.

Visiting medical officer ...	Dr. G. Hartley.

Sister, 1 ; nurses, 7 ; domestic staff, 4.

BRISTOL BOARDING-OUT COMMITTEE :—

Secretary	Miss G. E. Nichols.
Treasurer	City Treasurer.

The care of destitute children is a problem which has been met in Bristol by acceptance of corporate responsibility for their welfare, which involves maintenance either in (*a*) one of the cottages or scattered homes, or (*b*) by "boarding-out" under the supervision of boarding-out committees, with whom agreements under the Boarding Out Order, 1911, exist.

Children's homes.

1932	Occupations on 31st December	Over 16	From 3-16	Under 3	1933
43	Headquarters homes	—	41	—	41
157	Cottage homes ...	—	118	23	141
35	Scattered homes ...	—	21	—	21
12	Working boys' ...	9	1	—	10
247	Totals	9	181	23	213

The children's homes at Downend, specially erected for the purpose, consist of 10 cottage homes for school children, 12 in each home, a toddlers' home for 24 children (3-5 years), a babies' home for 40 children under three years, a receiving home where all new admissions are retained for two weeks and a convalescent home under the supervision of a trained sister. At the headquarters homes, Snowdon Road, Fishponds, there are two blocks of buildings providing accommodation for 40 children. In the four scattered homes at Charlton Road accommodation is provided for 40 boys, half of which is set apart for working boys. Each home is in charge of a foster mother working under the general direction of a resident superintendent and matron. The babies' home at Downend is in charge of a trained nurse. There is a total accommodation for 264 children, excluding the receiving and convalescent homes.

During the year under review, 100 children were admitted to the homes, and 134 discharged. Under the latter heading, 23 children were sent into service, 88 placed in the care of relatives, 8 boarded out, and 15 sent to special homes or institutions. The number of children in the homes at the end of the year is shown in the table above.

Boarded-out children.

1932	Boarding-out Committee	1933
10	Ashborne	10 children
68	Bristol	66 ,,
4	Olveston	5 ,,
3	Stonehouse	3 ,,
6	Winterbourne	6 ,,
	WILTS COUNTY COUNCIL.	
1	Bradford area	1 child
1	Trowbridge	1 child
2	Warminster area	2 children
6	Other Unions	6 ,,
101	Total	100 children

During the year 25 children were boarded out, chiefly with relatives, ten children obtained situations, eleven temporary cases returned to relatives, one was accepted by another authority, and three sent to special institutions, leaving a total of 100 children boarded-out at the end of the year, under the supervision of boarding-out committees with whom agreements under the Boarding-out Order 1911 were in existence.

It is obvious that the boarding-out system secures many advantages by replacing the children to a certain extent in family life, and the Health Committee has carried this principle into effect as far as possible. The sheltered life and restricted environment of institution life—cottage homes supervised by whole-time foster parents cannot be anything but institutions despite the homeliness of the title—tend to prevent the child from obtaining a proper knowledge of those values which may be regarded as essential when commencing working life. Boarding-out in carefully selected homes which allows them to gradually come in contact with the problems of life and upbringing in an ordinary home is undoubtedly the natural way in which normal children should make their acquaintance with the world. The misfortunes of their previous home life are much more likely to be forgotten when they are no longer associated with children who have suffered similar misfortunes, and moreover they need never realise their position as adopted members of a family. Almost everything, however, depends on the careful choice of the boarding-out home.

UNMARRIED MOTHERS.

Report by Mrs. N. H. Stott, Welfare Officer to the Public Assistance and Health Committees.

1932	CASES ASSISTED	1933
133	Applications received	135
24	Remaining over from last year	12
98	Admitted to Southmead Hospital	77
19	Confined at mother and baby homes	12
21	Other assistance given in confinement or not needed	36
1	Transferred to another area	1
6	Applications withdrawn	4
12	Arrangements not completed	17

During the year 135 *applications from unmarried mothers* or in respect of an illegitimate child were received, and of this number

103	were in respect of a	1st	child.
23	,, ,,	2nd	,,
5	,, ,,	3rd	,,
2	,, ,,	4th	,,
2	,, ,,	6th	,,

In addition to these 135 cases, there were 12 who had already made application, but for whom arrangements had not been made, making a total of 147. A number of the applicants were young girls. Ten were only 17 years of age or under, and more than one-third of the total number were not more than 21 years of age.

The young expectant mothers present a difficult problem. They were children in war time, whose upbringing, except in school, has included little of discipline and self-control for themselves and the boys with whom they have associated, often the victims of unemployment, with its consequent idle hours. It is not surprising that they appear wayward and unwilling to yield to any restrictions, determining to return home with the baby however poor and unsatisfactory conditions may be, rather than accept the help offered at a mother and baby home, which necessitates a stay of six months. When a girl can be brought to realise how much she and her baby will gain by this special help and is admitted to a mother and baby home, it is seldom that she wishes to leave before her time. The table above shows how these cases were dealt with last year.

Pending confinement, 27 girls were placed at the Diocesan Refuge or Elm House temporary home for various periods before admission to Southmead Hospital or to a mother and baby home, or for temporary help as when waiting for a situation; 18 to mother and baby homes; six to mother and baby hostel at Diocesan Refuge; five mothers and babies to Elm House temporarily, and five to other homes.

During the year 206 *affiliation cases* were dealt with including 57 cases incomplete and brought forward from 31st December, 1932, and 14 Salvation Army private cases. The results of enquiries made into these cases are analysed below :—

36	affiliation orders.
35	agreements.
7	not entitled to summons (married women).
4	married to putative father.
3	mother died.
16	abortion, still-birth, or child died.
1	child adopted.
31	no corroboration.
3	putative father not known.
4	putative father gone abroad.
1	putative father died.
6	returned to live with putative father.
1	transferred to another area.
6	applications withdrawn.
2	refused to give information.
1	refused to take proceedings.
45	incomplete.
4	incomplete (summons not served).
206	

Four maintenance orders (married women) have been obtained.

In connection with the high number of agreements, it should be noted that in practically half of the cases the man was married and in almost all the remaining cases there has been, or is, a possibility of marriage between the parties. In several instances they are too young to marry.

The sum of £3,645 15s. 1d. has been received and dealt with as follows :—

> £148 9s. 8d. was paid to the city treasurer in respect of maintenance of babies born at Southmead Hospital or mother and baby homes ; £1,241 6s. 4d. was paid to the collecting officer, Public Assistance Committee, being money paid at court or privately under separation or maintenance orders, affiliation orders and agreements for people receiving help in various ways from the Public Assistance Committee ; and £2,255 19s. 1d. paid to mothers and foster-mothers of illegitimate children, being money received through court on affiliation orders, etc.

This continues to be a most practical way of keeping in touch with a number who have been helped in difficulty and proves of use in many ways to the individual, who is often saved loss of time from work and cost of journeys, which can be ill-afforded.

Many unmarried mothers, unable to obtain affiliation orders or any payment towards the child's support, are of low wage-earning capacity. After-care work includes finding channels through which such mothers can receive help necessary to supplement their earnings. Eleven babies have been placed in homes where the mothers' payments vary from 2/- to 7/6 weekly, according to ability to pay ; six mothers have received weekly grants to assist them.

V.—SANITARY CIRCUMSTANCES.

1932	Summary	1933
6 miles	Length of new water mains laid	12 miles
4,967,928,000	Gallons supplied to district ...	5,146,916,000
93,506	Dwelling houses connected to mains	95,102
24.12 galls	Average supply for domestic purposes per head	24.71 galls
17	Notices served to secure proper water supply	27
5	Polluted wells closed	4
11 miles	Length of new sewers laid ...	31 miles
138,824 tons	House and trade refuse collected	137,911 tons
15,647	Dustbins on hire	17,540
3,442,000	Street watering (gallons) ...	3,317,000

Water.

Details of the sources of the water supply of the Bristol Water Works Company were given in my report for 1930 and there has been no important extension during the year. The Company has put in hand the construction of a new reservoir at Cheddar which will hold 1,200,000,000 gallons. The rainfall in Bristol last year which was 7.02 inches below the average for the last 78 years has necessitated measures to conserve the city water supply. I am indebted to the general manager of the Company (W. A. D. Alexander, Esq.), for the following statement on the position :—

" The deficiency of rainfall on the Company's gathering grounds during the last nine months of the year 1933 was exceedingly severe, only 51 per cent. of the average figure having been recorded, whereas the records of the Meteorological Magazine show that the average rainfall throughout England and Wales was about 74 per cent. of the normal figure during this period.

The table which follows shows the percentage of rainfall (*a*) at Litton, which is one of the Company's principal gathering grounds, and (*b*) the average rainfall on England and Wales during each of the last nine months. This statement clearly demonstrates the disadvantage at which this area has been placed.

As a result of this drought the water in our storage reservoirs was reduced by the end of November from 2,500,000,000 gallons to 730,000,000 gallons and the Company launched an intensive campaign requesting the consumers to co-operate by economising in the use of water and guarding against all waste.

This campaign had the gratifying effect of reducing the consumption by about 28 per cent., and the Company was enabled to maintain constant supply throughout the year, prohibiting only the use of hosepipes for washing motor cars, etc., and the use of water for fountains, fishponds and ornamental purposes.

Late in November it was found that our neighbours the West Gloucestershire Water Company had resources amounting to about

1⅓ million gallons per day in excess of the requirements of their district, and steps were immediately taken to acquire these excess resources for distribution in my Company's district of supply.

In order that the Company may be in a position to pump additional water from Cheddar in times of flood, a new motor and pump capable of dealing with an additional 4,000,000 gallons a day has been installed at that station, but although in normal years these springs are in flood for many months at a time, there has not yet been sufficient water to enable the company to bring this pump into use."

	LITTON RAINFALL		%	
	Average	1933	Litton (a)	England and Wales (b)
April ...	2.82	1.46	52	70
May ...	2.72	1.77	65	97
June ...	2.71	1.36	50	92
July ...	3.34	2.72	81	82
August ...	3.93	1.54	39	38
September	3.39	2.41	71	94
October ...	4.61	3.00	65	103
November	3.91	.87	22	59
December	4.52	1.05	23	29
	31.95	16.18	Litton rainfall for the last 9 months of 1933=51% of the average.	

Periodical chemical and bacteriological analysis of the supply made by the city analyst (see page 137) show that a high standard of purity is maintained.

Drainage and sewerage.

The city engineer reports no alteration to the system of sewerage or sewerage disposal in the city was made during the year 1933. With the exception of general maintenance and relaying of existing sewers, the only important work carried out was the continuation of the culverting of the Wainbrook in the Lyppiatt road and Chalks road districts, St. George, referred to last year.

The length of public sewers is approximately 473 miles, about 31 miles more than in 1932, of which 14 miles are in the additional area taken into the city under the Local Government Act, 1929 (extension of city boundaries under Somerset Review Order, 1933), and the remainder sewers laid in connection with street improvements and included in streets declared highways during the year.

Rivers and streams.

No special action in regard to river pollution was found necessary during the year.

Closet accommodation.

The sewage of the city is discharged into the tidal portion of the River Avon by means of the water carriage system.

By steady and persistent action the number of closets without flushing appliances remaining in the city continue to be reduced by an increasing rate annually. Flushing appliances were introduced in respect of 1,015 such closets during 1933.

Public cleansing, refuse collection and disposal.

The city engineer reports that by re-arrangement of districts and method, the cleansing of public streets has been generally improved and several light mechanical (petrol) vehicles purchased to facilitate the collection and disposal of street sweepings. Mechanical gully emptiers are now also in use for abstracting all matter from street gullies, and afterwards filling the gullies to above the level of the syphon with liquid disinfectant.

To facilitate the collection and disposal of house and trade refuse, more motor chassis were purchased during 1933 and fitted at the corporation workshops with special bodies with sliding covers, a type of vehicle which is proving very suitable for the work.

Important improvements were carried out at the Eastville refuse destructor, which are estimated to nearly double the quantity of refuse previously incinerated.

The service of notices under the powers of the Bristol Corporation Act, 1926 upon owners of property to provide proper ashbins was continued, approximately 4,000 properties were served with notice, all of which were complied with. Including the Corporation housing sites, there are now 17,540 ashbins on hire from the Corporation.

SANITARY INSPECTION.

Report by J. A. Robinson, Chief Sanitary Inspector.

Staff.

Chief sanitary inspector ... J. A. Robinson, F.S.I.A.
Superintendent sanitary inspector ... ... T. J. Cleal.

District sanitary inspectors, 16; clerks, 3; inspectors' labourers, 4; ratcatchers (including port ratcatchers), 4.

Statistical summary for year 1933.

	Visits	Notices served*		Notices complied with*	
		Verbal	Informal written	Verbal	Informal written
Dwelling houses	32,917	548	1,033	509	934
Houses let in lodgings ...	881	40	50	33	29
Common lodging houses ...	479	2	—	—	—
Tents, vans and sheds ...	206	8	7	6	4
Prep. or sale of food premises ...	1,570	124	18	120	18
Offensive trades: including fried fish shops, rag and bone dealers	803	79	16	74	10
Factories, workshops, and workplaces	1,046	51	60	35	32
Entertainment places ...	206	30	12	15	7
All other matters	1,034	109	64	98	49

Formal notices and orders served:	
For abatement of nuisances, etc.	164 notices
For repair of private party drains serving 160 properties ...	18 drains
For paving private passages serving 7 properties ...	1 passage

Drainage work:—	
New drains laid	353
Drain tests made	1,519
Drains repaired	1,563
Water closets:—	
Flushing appliances introduced	1,015
New pans fitted	1,411
Other repairs and cleansing	352
Cesspools abolished	5
Work on dwelling places:—	
Roofs repaired	822
Other new and repair work	1,871
Premises cleansed	1,411
Houses treated for dampness	441
Improvement of lighting and ventilation	117
New scullery sinks fixed	670
Washing conveniences installed in houses	26
Conveniences *re* storage, preparation or cooking of food installed	52
Bathroom and geyser ventilation	41
Cases of overcrowding abated	93
Underground rooms closed	—
Abatement of other nuisances	1,018
Animals improperly kept:	23
Manure receptacles provided	8
Aged and infirm persons—removed to satisfactory premises	1
Smoke:—	
Observations	69
Infringements of byelaws	18
Public Health Acts:—	
Dwelling-houses inspected for housing defects under P.H. Acts	2,003
Inspections of such houses made	5,803

* Excluding notices under Housing Acts.

The foregoing table briefly summarises the work accomplished by district sanitary inspectors during the year under review.

2,423 complaints were received, and altogether 39,142 visits were made by the staff for all purposes, resulting in 2,251 notices of an informal nature served of which 1,973 had been complied with at the end of the year. In addition, 183 formal notices and orders were served affecting 331 properties. These notices effected the abatement of insanitary conditions, including the relaying or repair of 1,916 drains ; the provision of flushing appliances to 1,015 closets previously unflushed and the replacement of 1,411 obsolete closets by modern type pans ; the repair of the roofs and interiors of 4,104 dwellings ; lighting and ventilation improved in 117 houses ; action taken to remedy dampness in 441 instances ; and overcrowding abated at 93 dwelling houses. During the year four cases were taken to court to enforce abatement of nuisances.

Housing.

In June of this year the scheme of co-ordinating the housing staff with the sanitary section came into full operation. Each sanitary inspector is now responsible for housing work arising on his district. The unification of duties has been the means of considerable acceleration in the progress of eradicating bad housing.

In addition to special concentration on slum clearance greater attention is being paid to individual houses which call for action under sec. 17 (repair) or sec. 19 (demolition) of the Housing Act, 1930. 814 houses (including clearance areas) were inspected during the year and dealt with under the appropriate section of the Housing Act.

Particular attention is paid to the degree of bug infestation prevailing in the houses comprised in slum areas at the time of inspection, so that appropriate action can be taken when the inhabitants are about to be removed to new houses, to prevent the transportation of the vermin to the new homes.

Premises and occupations controlled by bye-laws or regulations.

Houses-let-in-lodgings.

Bye-laws are in force in the city which incorporate the provisions of sections 6 and 7 of the Housing Act, 1925. At the end of 1933, 267 properties had been registered under these revised byelaws.

Common lodging houses.

There are 32 common lodging houses in the city (three less than last year), including one belonging to the Corporation, but excluding six seamen's lodging houses. The accommodation provided appears to be ample. Keepers and deputy-keepers of common lodging houses are registered annually.

The municipal lodging-house which is well patronised and fills a definite need in the city was fully described in the report for 1930. During 1933, 30,985 occupations were recorded, 10,561 less than in 1932 and a nightly average of 84 lodgers. The charge for each lodger per night is one shilling or 6/- for a weekly ticket ; baths, 3d., and parcel tickets, 2d. extra.

Tents, vans and sheds.

At the present time there are 82 such caravans, etc. in six districts of the city. Of these, 74 are more or less permanent structures, and eight (used by showmen, etc.) are temporarily stationed in

Bristol. These permanent vans, etc., which are occupied by 135 adults and 54 children have considerably increased during the year in number and population; approximately 17 adults and six children occupy the temporary structures,

Offensive trades.

Bye-laws are in force which govern scheduled offensive trades in the city. In addition to fish-frying businesses, there are 45 premises in the city wherein offensive trades are carried on: 122 inspections of these premises were made during the year and 399 inspections of fish-frying businesses.

Annual consents to establish or continue fish-frying.

No. of applications.		Annual consents		Applications withdrawn	No. of applications in abeyance at end of year.	Total no. of consents in force (December, 1933)
In abeyance from previous year.	Received during the year.	Granted	Not granted			
1	17	4	11	3	0	42

The Health Committee has also issued annual consents in respect of the businesses of tripe-boiling and gut-scraping. An application received during the year for consent to establish a soap-boiling business remains in abeyance at the end of 1933.

Underground sleeping rooms.

The Council has approved regulations for securing the proper ventilation and lighting of rooms in respect of which section 18 (1) of the Housing Act, 1925, applies, and the protection thereof against dampness, effluvia or exhalation.

Places of entertainment.

During the year the inspectors made 206 inspections of cinemas, theatres and other places of entertainments; some of these visits being during a performance.

The methods of heating and ventilating the halls, and the provision of sanitary accommodation were found to be generally satisfactory. It was necessary however, to serve notices or give verbal intimation with regard to insanitary W.C. accommodation or cleansing in 42 instances.

Workshops, etc.

Forty-one notices relating to sanitary defects in factories, workshops, etc., were received during the year from H.M. inspector of factories.

Homework—lists of outworkers received during 1933.

	No. of outworkers	
	February	August
Boot and shoe making	8	43
Manufacture of bedding	—	—
Making of wearing apparel	76	96
Particulars received from other authorities	2	1
Total ...	86	140

The lists of outworkers and their addresses are supplied to the town clerk by the various employers. These premises are visited by the district sanitary inspectors during the course of their duties.

Factory and Workshop Act, 1901.

1.—*Inspection of factories, workshops and workplaces.*

Premises. (1)	Number of Inspections (2)	Number of Written notices (3)	Number of Occupiers prosecuted (4)
Factories (Including factory laundries) ...	142	23	—
Workshops (Including workshop laundries)...	686	25	—
Workplaces (Other than outworkers premises)	62	6	—
Total ...	890	54	—

2.—*Defects found in factories. workshops and workplaces.*

Particulars (1)	Number of defects Found (2)	Number of defects Remedied (3)	Number of defects Referred to H.M. Inspector (4)	Number of offences in respect to which prosecutions were instituted (5)
*Nuisances under the Public Health Acts :**				
Want of cleanliness	178	171	—	—
Want of ventilation	7	9	1	—
Overcrowding	—	—	—	—
Want of drainage of floors	5	5	—	—
Other nuisances	44	46	—	—
Sanitary accommodation: insufficient	12	5	—	—
Sanitary accommodation: unsuitable or defective ...	32	33	—	—
Sanitary accommodation: not separate for sexes ...	—	—	—	—
Offences under the Factory and Workshop Acts :				
Illegal occupation of underground bakehouses (s.101)	—	—	—	—
Other offences ... ... (Excluding offences relating to outwork and offences under the sections mentioned in the schedule to the Ministry of Health (Factories and Workshops Transfer of Powers) Order, 1921)	10	10	—	—
Total ...	288	279	1	—

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* Including those specified in sections 2, 3, 7 and 8 of the Factory and Workshop Act, 1901, as remediable under the Public Health Acts.

Outwork in unwholesome premises, Sec. 108.

There were no instances of sanitary defects on outworkers' premises reported during the year.

Rag Flock Acts, 1911 and 1918.

Rag flock is used in a few premises in the city. Four samples were taken during the year, analysed by the public analyst, and found to conform to the standard of cleanliness laid down in the regulations.

Smoke abatement.

During the year 69 observations for smoke were taken and in 18 instances the emission of smoke was in excess of that permitted by the byelaws made under sec. 2 of the Public Health (Smoke Abatement) Act, 1926. The firms concerned were immediately informed and advice given to the employees responsible. The nuisances arising from the smoke emissions referred to were abated without statutory action.

Schools.

The medical officer of health is also the school medical officer and issues a separate report which deals with the health of the scholars and the sanitation of schools. Some 55,000 children are kept under medical supervision during their school career at the inspections and treatment clinics described on page 29.

Cleansing and disinfection.

Accommodation is provided at the central disinfecting station, St. Philip's Marsh, for the bathing and disinfestation of verminous persons of both sexes, and their belongings, and during the year 68 men and 38 women were dealt with. Children of school age receive attention at the school clinics.

The staff, equipment and plant at the central disinfecting station is as stated in previous reports. The number of disinfections last year of premises and articles, and articles destroyed, following exposure to infection are given below :—

Premises disinfected	3,996
Articles ,, ...	83,220
Articles destroyed	1,533

Cemeteries.

The existing cemeteries with land held in reserve (a total of 152½ acres, of which 123 acres are in use) will, it is anticipated, provide adequately for the needs of the city for the next 20 years. These cemeteries were reported in detail in 1932. Four are provided by the local authority (total 93½ acres), two by private companies (53 acres), and two by ecclesiastical bodies (6 acres). The crematorium at Arnos Vale cemetery was opened for use on 10th February, 1928, by the Bristol General Cemetery Company and 1,044 cremations have taken place since that date, including 300 in 1933.

Animal or insect pests.

During the summer months numerous complaints were made by the residents in many parts of the city of disturbance of rest due to the noise made by crickets (*Gryllus domesticus*) on refuse tips and allotments adjacent to the dwelling-houses. The crickets had found harbourage in these tips, and the exceptionally hot season was propitious to abnormal breeding.

In addition to the normal deposition of refuse, measures were taken in an endeavour to exterminate the pest, special attention being paid to the elimination of possible harbourage, and constant spraying with an efficient insecticide was applied to the tips over a period of about two months.

In the early autumn it was discovered that crickets were invading the dwelling-houses. Insecticide powder was supplied to the occupiers of infested houses and instructions given by the sanitary inspector as to the best means of preventing the crickets establishing themselves under the floors and in the cavity walls, etc.

Rats and Mice (Destruction) Act, 1919.

The services provided by the Council for the suppression of rats and mice were actively continued by the staff of four ratcatchers employed in the city and port under the direction of the chief sanitary inspector. The figures relating to rats destroyed on ships, quays, wharves, refuse tips, in the vicinity of Avonmouth, Bristol, or Portishead docks will be found in the report of the port medical officer of health. The work carried out in the city during 1933 was as follows :—

	Baits		Traps set.	Total no. of rats destroyed by trapping and fumigation	No. of rats examined at University laboratory (other than those caught on ships and docks)
	Laid	taken (approximate number)			
Generally in the city	104,100	50,923	2,182	1,399 and 33 mice	28
In public sewers (undertaken by the city engineer's department) ...	49,009	34,556	—	—	—
Total ...	153,109	85,479	2,182	1,399 & 33 mice	28

During National Rat Week (6th—11th November, 1933) the city engineer caused 15,931 baits to be laid in the city sewers (approximately 12,039 of which were taken) : and in the city 1,940 baits were laid (approximately 835 of which were taken) : and 35 rat traps were set, which resulted in 56 rats being caught.

Leaflets giving information as to the best methods of destroying rats and mice, etc., are available to the general public.

VI.—HOUSING.

Report by A. G. MORISON, M.A., M.D., D.P.H.,
Deputy Medical Officer of Health.

Staff.

Housing inspectors, 3 (1 temp.) ; clerks, 5 (3 temp.) ; inspectors assistants, 4 (3 temp) ; district sanitary inspectors (part-time).

1932	PARTICULARS ASKED FOR IN MINISTRY OF HEALTH CIRCULAR 1346.				1933
	Inspection of dwelling houses.				
552	(1) (*a*) Total number of dwelling houses inspected for housing defects (under Housing Acts)				814
1927	(*b*) Number of inspections made for the purpose				1,628
552	(2) (*a*) Number of dwelling houses (included under sub-head 1 above) which were inspected and recorded under the Housing Consolidated Regulations, 1925				814
1927	(*b*) Number of inspections made for the purpose ...				1,628
405	(3) Number of dwelling houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation				480
134	(4) Number of dwelling houses (exclusive to those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation ...				334
	Remedy of defects without service of formal notices.				
108	Number of defective dwelling houses rendered fit in consequence of informal action by the local authority or their officers				91
	Action under statutory powers.				
	Proceedings under secs. 17, 18 and 23 Housing Act, 1930.				
38	Number of dwelling houses in respect of which notices were served requiring repairs				87
	Number of dwelling houses which were rendered fit after service of formal notices :—				
38	By owners				44
2	By local authority in default of owners ...				15
	Proceedings under Public Health Acts.				
1350	Number of dwelling houses in respect of which notices were served requiring defects to be remedied, verbal notices excluded				1,033
	Number of dwelling houses in which defects were remedied after service of formal notices :—				
		Nuisances etc. No. of houses	Private party drains No. of notices	Private party drains Number of dwelling houses served	
128	By owners	74	1	4	78
146	By local authority in default of owners	22	13	118*	140
274		96	14	122	218
	Proceedings under secs. 19 and 21 Housing Act, 1930.				
180	Number of dwelling houses in respect of which demolition orders were made				100
39	Number of dwelling houses demolished in pursuance of demolition orders				82
	Proceedings under sec. 20 Housing Act, 1930 :—				
4	Number of separate tenements or underground rooms in respect of which closing orders were made				nil
nil	Number of separate tenements or underground rooms in respect of which closing orders were determined, the tenement or room having been rendered fit ...				nil
	Proceedings under secs. 11, 14 and 15, Housing Act, 1925 :—				
12	Number of dwelling houses in respect of which closing orders were determined, the dwelling houses having been rendered fit				18
110	Number of dwelling houses in respect of which demolition orders became operative				33
71	Number of dwelling houses demolished in pursuance of demolition orders				58

* In some of these cases the local authority relaid the combined drain and private contractors relaid branch drains, etc.

In May, 1933, the Council provisionally adopted a five-years' programme to clear 2,500 houses by the declaration of clearance areas and to demolish 400 individual unfit houses. A good beginning has been made towards carrying out the above programme as the following details indicate :—

Clearance Orders—Housing Act, 1930.

Under section 51 (2) of the Housing Act, 1930, in 1933, 21 official representations were made by the medical officer of health relating to the following areas :—

Skulls Barton, St. George.
Highland Court, Clifton.
St. Augustine's no. 2 area.
St. James' no. 1 area.
St. James' no. 2 area.
Old Bread Street, no. 1 area.
Old Bread Street, no. 2 area.
Cheese Lane, no. 1 area.
Cheese Lane, no. 2 area.
St. James' no. 3 area.
St. James' no. 4 area.
St. James' no. 5 area.
St. James' no. 6 area.
Dalton Square no. 1 area.
Dalton Square no. 2 area.
Dalton Square no. 3 area.
St. James' no. 7 area.
East Street, St. Paul's area.
Cumberland Street, St. Philip's area.
Folly Lane, St. Philip's.
St. George's Place, St. Augustine's.

The total number of houses included in these areas was 357, and the population 1,754.

In addition, 100 demolition orders have been made on individual unfit houses during the year.

VII.—INSPECTION AND SUPERVISION OF FOOD.

Report by J. A. ROBINSON, F.S.I.A., Chief Sanitary Inspector.

Staff.

Meat inspectors, 3; food, drug and dairies inspectors, 4.

(a) Milk Supply.

1932	SUMMARY OF WORK EFFECTED.	1933
	Dairies, milkshops and cowsheds :	
4773	Visits paid	5244
100	Notices served	150
92	Premises cleansed	117
34	Premises built, repaired or altered	81
21	Drains amended	49
1	Insanitary water closets amended	16
9	Water closets fitted with pans and traps ...	19
10	Water closets fitted with flushing appliances ...	20
428	Other defects remedied	541
	Samples taken :	
—	For pasteurised test	70
31	For bacillus abortus, etc.	—
303	For tubercle examination	394
43	Repeats	37
25	Certified milk	27
50	Grade A (tuberculin tested)	77
54	Grade A	50
46	Pasteurised	50
21	Category and special	20
32	Test samples at institutions	79
12	Butter, tubercle examination	—
847	Under Food and Drugs Acts	885
6	Raw cream	—
	Licences for graded milks.	
7	For the sale of certified milk	7
6	Bottling and sale of grade A (tuberculin tested)	6
19	To sell grade A (tuberculin tested)	19
1	To produce grade A milk	1
1	To bottle grade A milk	1
13	To sell grade A milk	13
3	Supplementary licences to sell graded milks from premises outside the city	3
4	To produce pasteurised milk	4
2	To sell pasteurised milk	2

During the year, 1,689 samples of milk were taken for chemical and bacteriological examination, an increase of 219 over the number examined in the previous year, mainly for bacteriological purposes.

Compared with previous years the amount of milk cleansed and pasteurised before delivery to the consumer has increased and is estimated as 53.5 per cent. approximate of the daily supply. The amount of 'bottled' milk retailed is estimated to have been increased to 58 per cent. approximate (not including an additional 10.1 per cent. approximate of 'homogenised' milk).

1932	Amount consumed daily	1933
21 gallons	Certified milk	21
277½ ,,	Grade A, T.T.	249
165 ,,	Grade A	186
8,657 ,,	Pasteurised	9.977
1,759 ,,	Homogenised	2,055

Milk examined for tubercle bacilli.

Tubercle bacilli were found in 27 or 6.9 per cent. of the 394 original samples taken. The farms of the city producers were visited by the veterinary surgeon and the infected cows removed from the herd and destroyed.

In all of the samples taken for examination for tubercle bacilli, preliminary reports were received, eight of these reports indicated an excessive amount either of dirt, pus, organisms, etc., in the milk, and these reports were forwarded to the county authorities concerned.

The 431 samples of milk including repeats examined for tuberculosis were from :—

Producers.	No. of specimens.	Tubercle bacilli present in.
City	84	7
Somerset	131	3
Gloucestershire	206	11
Wiltshire	10	6

Milk (Special Designation) Order, 1923.

Certified milk.

In accordance with the instruction of the Ministry of Health, 27 samples of certified milk were taken and submitted for examination to the city analyst and the University preventive medicine laboratory. Five samples failed to comply with the requirements of the Milk (Special Designations) Order, 1923. Four samples had a bacteria count in excess of the maximum laid down in the order, and one sample gave an excessive count and *B. Coli* in $\frac{1}{10}$ c.c.

Grade A (tuberculin tested) milk.

Of the 77 samples of grade A (tuberculin tested) milk examined, seven showed the presence of *B. Coli* in 1/100 c.c. in excess of the requirements of the order and four samples gave an excessive bacteria count and one sample with excessive count and *B. Coli* present in $\frac{1}{100}$ c.c.

Grade A milk.

Of the 50 samples of grade A milk examined, nine samples failed to comply with the requirements of the order, five had an excessive bacteria count, and four samples had *B. Coli* present in $\frac{1}{100}$ c.c.

Pasteurised milk.

Fifty samples of pasteurised milk were taken and three failed to comply with the requirements of the order, having an excessive count.

Seventy samples of milk were also taken and submitted to the University (by number) for various test purposes in determining the extent of pasteurisation. The efficiency of these tests may be judged by the fact that 90% of the samples submitted were returned correct according to their purchase. These tests have proved to be of great value in revealing irregular practice.

During the month of December tubercle bacilli having been found in the raw milk supply of two of our institutions, immediate steps were taken for the safety of the milk, and pasteurisation insisted upon until the infection was cleared. A few days later samples were taken and submitted to the above series of tests, the result of which showed that some of the milk was not pasteurised, and the other partially pasteurised, or that some raw milk had been added. This was followed up by taking a number of further samples from the pasteurising plant, the results of which were satisfactory.

These examinations are now carried out as a matter of routine, and the preventive medicine laboratory is conducting an enquiry into more exhaustive methods of technique.

The pasteurising plants used by the four firms holding licences for the production of pasteurised milk are of the following size and make :—

Firm	Positive holder.	Capacity per hour gallons.
A	Enock's 8 drum	600
B	Silkeborg	350
C	A.P.V.	1,000
D	Astra	220

Milk and Dairies Order, 1926.

Other milks.

The city analyst classifies samples of other milks so that :—

Category 1—should satisfy the tests as applied to "certified" milk.
Category 2—should comply with grade A requirements.
Category 3—those samples which fall below category 2.

and of the ten samples submitted during the year five were placed in category 1, three in category 2 and two in category 3.

Registration.

The numbers of registrations are :—

Cowkeepers	62
Dairymen	395
Milkshops	467

in addition to which there are 147 dairymen retailing milk within the city from outside districts, making a total of 1,071, an addition of 60 over the previous year, due to the extension of the city boundary.

The cowsheds are in a poor condition generally. As a rule, the Company's water is laid on, but there are a few farms on the boundary where the supply is obtained from collected rain water, wells and rhines as no Company's supply is available.

The 395 dairies in the city require constant attention. It is essential that every dairy be provided with a separate room for dairy purposes. In this I can report substantial progress, but the problem of the 467 registered small milkshops still gives rise to much concern.

One method of dealing with these small milkshops which has proved successful in a large number of cases is to insist on the small general shop retailer dealing only in bottled milk.

Many shopkeepers are allowed to sell milk on the understanding that only unopened bottled milk is sold, thus eliminating some of the most undesirable retail premises. The number of shopkeepers in the city who retail homogenised milk is 543, some of which are included in the figure relating to registered milkshops. The registration of the remainder of these shop-keepers is being proceeded with.

Legal proceedings.

Reason	No. of prosecutions.	Result.
Filling a bottle with milk on other than registered premises (sec. 31).	1	Fined 5 shillings

(b) Meat and other foods.

1932	SUMMARY OF WORK EFFECTED.	1933
	Slaughterhouses and meat, etc., premises.	
5,904	Visits to slaughterhouses	6,079
1,272	,, wholesale and retail meat markets	1,407
2,661	,, meat and fish shops	2,344
66	,, cattle markets and railway sidings	48
5	,, fish curing premises	17
67	,, sausage, etc., making premises	76
11	,, cold stores	3
81	Slaughterhouses cleansed	76
2	Slaughterhouses rebuilt, repaired or altered	3
7	Sanitary defects, etc., remedied	7
	Meat, etc., destroyed.	
210	Entire carcases	281
32	Beasts, cows, etc.	49
12	Calves	6
67	Sheep	85
99	Pigs	141
69. 2.2.27	Total weight—tons, cwts., qrs., lbs. ...	79.17.3.8¾
30.18.1.17	Meat from slaughterhouses and shops	38. 8.0.8½
12. 3.0.15	Meat from cold stores	4.15.2.20
26. 1.0.23	Fish, poultry, rabbits, vegetables, etc. ...	36.14.0.8¼

The Bristol Corporation Act, 1926 enables the Corporation to insist upon all butchers bringing freshly killed meat into the city from outside districts to submit the meat for inspection by the city inspectors: but this power has not been utilised, pending the provision of a public abattoir. In addition, the city inspectors may visit slaughterhouses situated within a radius of ten miles from the Council House and examine meat in course of delivery, which if found diseased or unsound, may be seized and dealt with as if exposed for sale. A considerable amount of the fresh meat consumed in the city is slaughtered outside the city boundaries.

By arrangement with the chief constable, police officers co-operate with health department officials in regard to certain sections of the meat regulations and other matters, and their help has proved most useful and effective.

During the year the city food inspectors discovered or had surrendered to them nearly 80 tons of meat and other foodstuffs which was afterwards destroyed as diseased, unsound or unfit for human food, an increase of 10¾ tons on the quantity destroyed last year. The meat included the entire carcases of 281 animals which were destroyed for the undermentioned reasons :—

Condition	Number of animals.	Totals.
BEASTS, COWS, ETC.		
Dropsical	4	
Emaciated	5	
Emaciated and dropsical	4	
Emaciated and tubercular	3	
General bruising, peritonitis (each, one)	2	
Traumatic septic peritonitis	1	
Tubercular	30	49
CALVES.		
Fevered, unborn, Johne's disease (each, one)	3	
Sour and decomposed	3	6
SHEEP.		
Brine stained	1	
Caseous lymphadenitis	2	
Died	5	
Dropsical	17	
Dropsical and emaciated	47	
Emaciated	5	
Jaundice	2	
Moribund, inflamed, peritonitis, pneumonia, scours, strongylus rufescens (each, one)	6	85
PIGS.		
Bone taint	2	
Died	2	
Dropsical, choked, emaciated (each, one)	3	
Dropsical and emaciated or tubercular (each, one)	2	
Emaciation and laceration or tubercular (each, one)	2	
Erysipelas	11	
Inflamed, moribund, septic (each, one)	3	
Inflammation and watery joints ...	5	
Jaundice and dropsical	4	
Peritonitis	7	
Pleurisy	3	
Pleurisy and pericarditis	2	
Pneumonia and septicaemia	4	
Pneumonia and peritonitis	1	
Pyaemia	3	
Retention of urine	1	
Swine fever	46	
Tubercular	38	
Tumour in stomach	1	
Tubercular congestion and pleurisy ...	1	141

Legal proceedings in respect of unsound meat, etc.

Reason	Prosecutions	Results
Failing to notify slaughtering of an animal which was diseased and unfit for food of man	1	Dismissed
Unlawful possession of meat in course of preparation for human consumption	1	Dismissed. Order made for destruction of meat.

Slaughterhouses.

Licenses valid.	In use.	Not in use	Total
Registered slaughterhouses ...	23	5	28
Permanently licensed do.	12	2	14
Annually licensed do.	33	—	33
Knackers' yards (annually licensed)	2	—	2
Total	70	7	77

This table shows that at the end of the year 77 licences to slaughter were in force in the city. Seven of these licences were for slaughterhouses not actually in use, although licensed, and two of the licences relate to additions made to slaughterhouses already licensed. The net total of licensed slaughterhouses is therefore 68, of which 33 are licensed annually. Twelve were licensed between the years 1858 and 1890 for the life of the licensee (known as permanently licensed) and 22 are registered, that is to say, were in use prior to the year 1858. A large number of these slaughterhouses are quite unsuitable and insanitary but to close them without providing alternative accommodation will lead to overcrowding and insanitary conditions in other slaughterhouses.

During the year the council has decided to proceed with the erection of an up-to-date public slaughterhouse upon a site of approximately three acres with further room for extension of about five acres situated in the Greenbank district of the city at an estimated cost of £30,000. The Ministry of Health has intimated their provisional sanction of a loan for the purpose. Plans are accordingly being prepared, and it is hoped that the abattoir will be erected and available to local butchers during the present year.

Under the Public Health (Meat) Regulations, 1924, licensees are required to give the department notice of killing and daily visits are paid to the principal bacon factories in the city for the purpose of inspecting meat proposed to be used for human consumption. In this way the city staff inspected during the year no fewer than 129,478 animals, including 3,553 beasts, 3,792 calves, 21,875 sheep and 50,129 pigs.

Humane slaughtering.

In 1925 the Council adopted a series of slaughterhouse byelaws which include a modified form of clause 9 (b) of the model byelaws and make the compulsory use of a mechanical instrument for stunning applicable to cattle and calves only. The instrument has also been voluntarily adopted by a number of slaughterhouses in connection with the slaughter of pigs.

Canned pineapples.

On routine examination of a cargo from Calcutta some cases of tinned pineapples were opened. It was noticed that several of the tins showed soldering on one of the ends. A number of other cases were opened, therefore, and it was found that the tins also showed, in varying numbers, this same soldering—some one mark, some more, others with punctures without soldering, one or two showed indentation marks as if preliminary to a definite puncture. Several tins of the same consignment showed no such soldering ; and further, at the Bristol Docks at the same time, we had the opportunity of examining another consignment of pineapples from Singapore and we were unable to find any of this soldering.

We came to the conclusion that this soldering was something accessory to a normal mode of preparation, or perhaps that it had been carried out during transit. Some of the tins were opened and it was found that in every case there was underneath the "drop" of solder, a definite puncture. A nail could have made the puncture.

We considered, therefore, that there were reasonable grounds for an opinion, either of improper preparation, or of the sterility of the tins having been interfered with during transit, say by careless nailing of the packing cases, causing punctures, and the punctures having been subsequently soldered.

Notice requiring sorting of the tins was served, this " sorting " being the division of the consignment into two parts, one part of tins showing evidence of accessory soldering at top or bottom, and the other part of tins not showing this accessory soldering. Samples from the soldered tins were submitted for bacteriological examination to the department of preventive medicine, where they were examined along with tins of pineapple purchased in shops in Bristol as controls. This examination revealed that the soldered tins were bacteriologically contaminated while unsoldered tins, and the other controls, were in all cases quite sterile.

It was considered that this report, together with the absence of any satisfactory explanation being known to, or offered to, us for this soldering, justified the opinion that these soldered tins were diseased or unsound or unwholesome or unfit for human consumption, for there was evidence of something being not sterile which ought to have been sterile, or that the sterility had been broken at some time or other under circumstances without control and therefore dangerous to health.

The tins without soldering marks were released, but the usual notice of condemnation was served concerning the others.

An account of the occurrence was submitted to the Ministry of Health.

Preparation of food, etc.

All premises utilised for the preparation of food, etc., for human consumption are periodically inspected by the district sanitary inspectors. These places include bakehouses, cooked meat shops, fried fish shops, ice cream manufacturers, restaurants, street traders, etc. 2,373 inspections were made during the year, and 237 defects were found and dealt with.

Premises used for the manufacture and sale of ice cream are registered annually by the Corporation ; during the year 385 were so registered.

The business of fish frying has been declared an offensive trade and since 1926 the Health Committee has granted annual consents to the establishment of approved new businesses. There are 193 fried fish shops in the city, 42 of which are subject to annual consents.

(c) Adulteration, etc.

SAMPLES SUBMITTED TO THE PUBLIC ANALYST, 1933.

Nature of sample.	Number of Samples.		
	Submitted	Reported as genuine	Condemned
Arrowroot	4	4	—
Aspirin tablets	4	4	—
Baking powder	1	1	—
Blancmange powder	1	1	—
Boracic ointment	9	8	1
Brandy	8	6	2
British wines	8	6	2
Bun flour	1	1	—
Butter	147	142	5
Camphorated oil	4	4	—
Cheese	12	12	—
Cider	4	4	—
Cinnamon	4	3	1
Cocoa	4	4	—
Cod liver oil	2	2	—
Coffee	11	11	—
Coffee and chicory	1	1	—
Condensed milk	1	1	—
Cream	15	12	3
Custard powder	1	1	—
Dried fruits	16	16	—
Epsom salts	4	4	—
Gin	4	4	—
Glauber salts	8	6	2
Golden syrup	2	2	—
Honey	1	1	—
Ice cream	4	4	—
Jam	17	16	1
Lard	16	16	—
Lime water	4	4	—
Margarine	8	8	—
Mercury ointment	8	4	4
Mil-Co	2	2	—
Milk	885	837	48
Mineral water	8	8	—
Mustard	8	8	—
Olive oil	2	2	—
Pepper	12	12	—
Pickles and sauces	9	9	—
Plain flour	8	8	—
Rice	4	4	—
Rum	4	4	—
Sardines	12	12	—
Sausages	12	12	—
Self-raising flour	4	4	—
Skim-milk	7	7	—
Sweetmeats	4	4	—
Table jelly	4	4	—
Tapioca	4	4	—
Tea	15	15	—
Tincture of iodine	6	6	—
Vinegar	20	20	—
Whisky	7	7	—
Zinc ointment	4	4	—

During the year, 1,395 samples of food and drugs were taken for analysis under the provisions of the Food and Drugs (Adulteration) Act, 1928, and allied acts and regulations, the proportion of samples examined being 3.41 per 1,000 population. The table above, which gives details of the samples submitted to the public analyst, shows that 69—or 4.9 per cent.—were condemned as not genuine.

Legal proceedings were taken in 29 cases and penalties were imposed as follows :—

£3 (one case)
£1 (two cases).
5/- (one case).
£2 costs (one case).
£1 costs (one case).
Pay costs (3 cases).
£2 (one case)
10/- (five cases)
£2 2s. 0d. costs (one case).
£1 1s. 0d. costs (two cases).
10/- costs (five cases).

The six remaining cases were dismissed.

Butter.

All butter factories registered with the local authority were inspected during the year. Two new factories were registered.

Poisons and Pharmacy Act, 1908.

All premises licensed for the sale of poisonous substances for agricultural and horticultural purposes have been inspected. Two licences to sell were not renewed. The Pharmacy and Poisons Act, 1933 received the Royal Assent on the 28th June, 1933. No orders in Councils have yet been made bringing any of the provisions of the Act into force.

Agricultural Produce (Grading and Marking) Act, 1928.

The cold stores, wholesale warehouses and retail premises have been visited in connection with the marking of eggs. In three instances vendors were cautioned for not having eggs stamped as required by the Act.

Merchandise Marks Act, 1926.

A number of vendors of butter were cautioned for improper marking, and failing to mark imported butter as required by the Act. The marking of imported tomatoes and apples continues to be unsatisfactory from the point of failing to give the country of origin ; there were few instances of incorrect marking. The marking of imported eggs was, on the whole, satisfactory.

Destructive Insects and Pests Acts, 1877-1907.

Inspections were made during the season with regard to wart disease of potatoes by the ministry inspector and the inspector of the local authority. Two new centres of wart disease were discovered ; one, a bad case, being on an allotment field in which there were several plots previously scheduled. The Ministry have now prohibited the planting of any but immune varieties of potatoes upon this group of allotments.

The colorado beetle was discovered in this country last summer, and notices of warning were issued to potato growers throughout this area.

Fertilisers and Feeding Stuffs Act, 1926.

During the year 23 samples were collected and submitted to the agricultural analyst ; of these five were outside the permissible limit of variation, and three contained foreign matter.

Proceedings were taken in one case and the seller ordered to pay 4/- costs. A conference concerning the working of the Act was held at the Bristol University, and several suggestions of amendments to the Act and Regulations were submitted to the Ministry.

The following is a contribution made by Mr. W. T. Lloyd, inspector under the Food and Drugs Acts, at the conference upon the duties of an inspector under this Act.

"In Bristol the duties of inspector and official sampler are carried out by the same officers ; we receive few calls to act as official samplers.

Under the 1928 Regulations a sample could be drawn from a parcel of 500 packages but, as you are well aware, under the Regulations of 1932 and the circular letter of the Ministry of 19th August, 1932, a percentage of samples must be drawn from the whole of the stock, and mixed together, and from this your final sample for analysis taken.

It was recently reported by our colleagues in Gloucestershire that a large number of young pigs had been ill, and many had died ; and that they had traced the cause to the sharps fed to the young animals. They reported the sharps in question had been found to come from Bristol.

We obtained from the mills and warehouses some test samples, and one collected at Avonmouth was reported as containing foreign structures characteristic of cruciferous seeds. This sample was taken from one bag as it was filled at the shoot in the mill.

Upon receiving this report we again visited this mill for the purpose of obtaining an official sample. We were there faced with a stock of 4,000 bags. From these we drew 124 samples, which were mixed together, and a sample was taken as required by the Act. The result of the analysis of this sample was that there was present to an extent of not more than 2 per cent. foreign structures characteristic of cruciferous and polygonaceous fruits. There may have been a batch of these bags containing quite a high percentage of deleterious matter but when samples from a number of, say, genuine bags were mixed with these, the amount of deleterious matter is greatly reduced. A farmer might receive a number of bags all of which contained an injurious ingredient ; further, one bag might last a farmer a few days, dependent, of course, on the number of his stock.

I submit that when deleterious ingredients are being looked for, the taking of a sample from *one* bag should be permissible, and also that there should be powers to take as many samples from individual bags as the inspector may deem necessary. There may be millings of different days, or in a warehouse supplies from different sources.

As the amount of deleterious matter was below the 4 per cent. of vegetable substances other than wheat allowed in Wheat Offals (Implied Definition Sch. 4) and also under schedule 5 (b) it was considered a poisonous substance *naturally present* in the material or materials from which the feeding stuff was derived, it was considered there was no case to take to the Courts. I should like to express my thanks to Mr. A. W. Ling, agricultural officer of the University of Bristol, for his very valuable assistance to us in this matter.

Another of our difficulties was obtaining a sample from a manufacturer. Samples of meat and bone meal taken in the city were reported as not complying with the statutory statement. The source of supply was situated some 10 miles outside the city. An order was placed by the Bristol firm for delivery of a supply on a given date and accepted. The previous afternoon to the day of delivery, we visited the premises in the county and were told that the order was just being put in hand, and would be completed that night, and delivery made the next morning. We visited the mill again the following morning to be told that they were so busy the previous afternoon they had not been able to start making the meat and bone meal. This order was not completed, in fact, for some two or three weeks. The delivery was made by the seller. I suggest an inspector should have power to take a sample at the place of delivery (as under the Food and Drugs Act) while the article is still in the hands of the manufacturer or seller, or his agent. Had the purchasers in this case sent to collect the goods at the mill the sample would naturally have been taken at the mill, the inspector being present by arrangement with the purchaser at the time he collected the goods.

There is one other point I would like to mention.

So far we have experienced little difficulty in obtaining assistance in taking a sample at mills and warehouses, men used to the stock having been lent by the firms on whose premises the sample was being taken.

Has anyone experienced difficulty in this direction, and, if so, would they kindly say how they overcome it ? "

(d) Chemical and bacteriological examination of food.

The city chemical and bacteriological laboratories for the examination of food, situated at 36 Queen Square, are under the direction of Edward Russell, Esq., B.Sc., (Lond.), F.I.C., F.S.C., who issues a separate report containing full particulars of the nature and number of samples submitted for analysis during the year.

Details of work done for this department will be found in the appropriate section of this report.

Nutrition.

During the year the dietaries approved for inmates of two public assistance institutions and the occupation centre established in Bristol under the mental deficiency Acts were reviewed. Dr. A. G. Morison, the deputy medical officer of health, who undertook the enquiries along with the responsible officers of the institutions, submitted the following reports which were subsequently approved.

Diets at Stapleton Institution.

The diet supplied during the week ended 17th December was considered in detail. During that period the daily population averaged 743. This is a fair sample upon which to base conclusions.

The standard adopted is that of the Advisory Committee on Nutrition of the Ministry of Health submitted in their recent memorandum "The Criticism and Improvement of Diets."

A diet must stand four-square upon calories, first-class proteins, mineral matter and vitamins. Any excess of one of these constituents does not compensate for any deficiency of another, for all four must be individually sufficient.

Calories (energy value).

The diet gave 3113.3 calories daily per man value. The standard is 3,000. The distribution of this energy supply amongst the proteins, fats and carbo-hydrates was 12.4 per cent., 32.9 per cent. and 54.7 per cent. respectively. The standard distributions are 10-15 per cent., 20-35 per cent. and 50-70 per cent. respectively.

These two points indicate an over-supply of calories, just tending to be over-loaded as regards fats. (It is felt that 3,000 calories is rather a liberal standard for the inmates of Stapleton, for, during the week analysed, only 33 per cent. were up and at work, and probably very few of these were doing nearly a full day's work, and 14.5 per cent. were confined to bed).

First-class proteins (proteins of animal origin).

The diet gave 45.4 grammes daily per man value, and 5.9 per cent. of the total calories. The standards are 37 grammes and 5 per cent. of the total calories. The total quantity of first-class protein conforms to the standard.

Protective foods (foods containing mineral matter and vitamins).

The protective foods are (a) milk and milk products ; (b) fresh vegetables and fruits ; (c) liver (including fish, liver and cod liver oil) ; (d) fish, especially fat fish and fish roes ; and (e) eggs.

These protective foods were in the diet as follows :—

(a) Milk, .56 pints daily per man value ; butter, 5.25 pounds in all per week (margarine, 1.27 ozs. daily per man value) ; cheese, 1.27 ozs. daily per man value ; (b) vegetables—cabbage, twice weekly ; onions, once weekly ; carrots, once weekly ; parsnips, twice weekly ; swedes, twice weekly ; fresh fruits, absent ; fresh salads, absent ; (c) liver, absent ; (d) fish, 8.2 ozs. weekly per man value (large fish—cod, hake, etc.) ; (e) eggs, .514 of an egg weekly per man value.

The standard for these foods is one pint of milk daily, cheese to be partaken freely, one orange or one tomato or a helping of raw salad daily, 1 oz. of butter or vitaminised margarine daily, and some fat fish, such as herring, once a week in the winter.

The diet is deficient in the protective foods. For the consumption of milk is small, there is not a daily supply of fresh fruit, or of fresh vegetables as salads, the margarine is devoid of vitamin, liver is absent as are also the fat fishes and fish roes, and eggs are but poorly given.

Conclusion.

The diet at Stapleton Institution supplied more than sufficient calories with just a slight tendency to the relative over-use of fats in that supply, and it was definitely deficient in regard to the supply of the essential minerals and vitamins.

It was recommended that the diet be amended to rectify this lack of the protective foods. After considering in detail all the articles mentioned in the diet, it appeared that the appropriate changes were these—

i. The reduction of 8 ozs. of meat weekly per man value.
ii. The addition of 6 ozs. (minimum) milk daily per patient.
iii. The introduction of liver once a week as a " meat " dish (herrings or fish roes are alternatives).
iv. The introduction of fresh fruits (e.g., oranges) or fresh vegetables (e.g., tomatoes or fresh salads daily according to season).
v. The margarine to be vitaminised.

Concerning the first recommendation, the reduction should take place gradually, say by two or three steps over a period of six months, according to the discretion of the resident medical officer and master. This was recommended because the population of the institution is largely a very slowly changing one and it is probable the inmates might feel aggrieved at a sudden apparent reduction without being able to have a due appreciation of the much more valuable additions and changes.

Diets at Eastville Institutions.

The main features of the diets of the above institution were the following—

1. The "ordinary diet" showed the protein content to be below the standard. This was rectified by the addition of 2 ozs. of cheese three times weekly at the evening meal.

2. The " diets for the aged and infirm " also had a low protein content, which was improved by allowing a larger supply of milk per person.

3. For the " classified group " of inmates, diets with too many calories were being given, and slight adjustments were recommended.

4. For the "low diets" an additional amount of milk was recommended.

5. For all the diets a slight variation to diminish the monotony of the meals was necessary, and the addition of fresh vegetables and fresh salads and vitaminised margarine was recommended.

6. In all cases it was considered that the medical officer of the institution should have discretion to alter diets given according to the medical condition.

Diets at Park Row Occupation Centre.

The transfer to the Council on the 1st April, 1933, of responsibility for maintenance of mental deficiency occupation centres gave rise during the year to consideration of the mid-day meal provided for the youths and young children attending the industrial and occupation centres established at 15 Park Row. A dietary was laid down as a guide, this to be reconsidered after a period of three months experience.

The dinners consist of two courses :—

(*a*) A meat course, with two vegetables.
(*b*) Pudding.

(*a*) *Meat course* (e.g., roast meat, stewing meat, mutton, salt beef).

Allow 4 ozs. per person.

Liver, or liver and bacon, or fish, to appear not less than once per week, and one of these three, twice a week quite frequently.

Liver—4 ozs. per person.

Liver and bacon : liver, 3 ozs. } per person.
bacon, 2 ozs. }

Fish—8 ozs. per person (e.g., cod, haddock, hake, whiting, plaice, etc.)

Pies and Irish stew to be served at discretion. The meat content should approach the 4 ozs. per person standard. Occasional changes are bullock's heart ; gammon.

Vegetables.

(1) Potato—allowance to be 8 to 10 ozs. per person, and
(2) Cabbage—say 4 to 6 ozs. per person.

(The second vegetable may be cabbage, carrots, turnips, turnip tops, onions, salads, lettuce, tomatoes (fresh and fried), beet, etc. (according to season and dish).

(*b*) *Pudding.*

(1) Milk puddings (e.g., semolina, tapioca, rice, etc.—8 ozs. per person) with stewed fruit (say, three times a week).

Milk pudding is, per pound (i.e., two portions)—3 ozs. rice, etc., ½ oz. sugar, ½ oz. fat, ½ pint milk, water and salt a sufficiency.

Stewed fruits to be served with all milk pudding, e.g., apples, apricots, prunes, figs, etc. Allowance of fruit, 3 to 4 ozs.

or,

(2) Other puddings are jam suet, and fruit pudding, e.g., currants, dates, figs, raisins, etc.

Portion per person should be 6 ozs.

Quantities for fruit pudding as follows :—7 ozs. flour, 2 ozs. fat, 2 ozs. figs, raisins, etc., salt to taste and water a sufficiency.

VIII.—PREVALENCE OF AND CONTROL OVER INFECTIOUS AND OTHER DISEASES.

Staff.

Deputy medical officer of health	A. G. Morison, M.A., M.D., D.P.H.
Tuberculosis Officer	C. J. Campbell Faill, F.R.C.P., Ed.
Assistant tuberculosis officer...	J. Scott Currie, M.B., Ch.B.
Assistant medical officers ...	A. A. Dalby, M.C., M.R.C.S.
,, ,, ,, ...	A. F. Alford, M.B., L.R.C.P., Ch.B.
,, ,, ,, ...	M. A. O'Donohoe, M.B., Ch.B., B.A.O.
,, ,, ,, ...	C. P. Hay, M.B., Ch.B., M.R.C.P.(Ed.), D.P.H.
,, ,, ,, ...	G. C. Kelly, B.Sc., M.D., D.P.H.
,, ,, ,, ...	A. R. Forbes, M.B., Ch.B., D.P.H.

Home nurses, 3; dispensary clinic nurses, 3; dispenser (part time), 1; laboratory assistant and X-ray operator, 1; sanitary inspectors—as detailed under "inspection"; disinfecting staff, 9; clerks, 10.

The important facts to be noted with regard to infectious disease in the city are the following :—

(1.) That 250 more infectious cases were notified in 1933 than in 1932 giving an increased attack rate of .52 per 1,000 population. This rise is attributed to the increased number of cases of diphtheria, scarlet fever, pneumonia and pulmonary tuberculosis, mitigated mainly by the fall in the number of dysentery cases.

(2.) The death rate for the principal zymotic diseases, viz. :—enteric fever, smallpox, measles, scarlet fever, whooping cough, diphtheria, and diarrhoea and enteritis, under two years of age was .22 per thousand, compared with .23 last year.

(3.) Fifty-three per cent. of the infections were of children below the age of 15 years (36 per cent. of school age—5-15 years).

(4.) Sixty-nine per cent. of all notifiable infectious disease excluding tuberculosis were isolated in hospital.

(5.) There were no notifications during the year of smallpox, cholera, plague, typhus fever, relapsing fever, continued fever, malaria (except in the port) or acute polio-encephalitis, and the diseases which show decreases in the number of cases were enteric fever (5 less), cerebro spinal meningitis (6 less), poliomyelitis (4 less), dysentery (121 less), puerperal fever (10 less), ophthalmia (5 less), tuberculosis of the central nervous system (1 less), tuberculosis of vertebral column (2 less), tuberculosis of other organs (12 less).

(6.) The most notable increase in cases are those recorded for diphtheria (106 more than last year), scarlet fever (133 more), pneumonia (98 more), erysipelas (30 more), encephalitis lethargica (2 more), puerperal pyrexia (2 more), pulmonary tuberculosis (44 more), tuberculosis of bones and joints (6 more).

Tables follow giving details of all notifiable diseases by age groups, quarters and districts; also the numbers and percentage of cases removed to hospital, and mortality, and in the reports of the medical superintendents of the city hospitals, sanatoria, etc., will be found further observations on the type of disease nursed. Puerperal fever and ophthalmia neonatorum are specially dealt with in the report dealing with maternity and child welfare.

Notifiable Diseases during 1933 (including Port cases).

NOTIFIABLE DISEASES.	CASES NOTIFIED IN WHOLE DISTRICT.								REMOVED TO HOSPITAL		DEATHS IN WHOLE DISTRICT.								
	At all ages.	At ages—years.										At ages—years.							
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and upwards	No.	%	All ages	Under 1	1 to 2	2 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and upwards
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet fever	770	7	164	489	67	39	4	...	538	70	4	...	1	...	3	...	...	...	...
Typhus fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria	640	9	157	372	49	46	7	...	637	99	22	...	1	6	14	...	1	...	...
Enteric fever (including paratyphoid) ...	11	...	...	3	2	4	2	...	10	91	2	...	...	...	...	...	1	1	...
Relapsing fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal fever	4	...	...	...	...	4	...	...	3	75	6	...	...	...	...	2	4	...	...
Puerperal pyrexia	46	...	...	...	8	37	1	...	2	4	20	...	...	...	...	6	13	1	...
Pneumonia	514	16	50	48	57	138	122	73	181	35	282	52	12	14	9	4	27	84	80
Erysipelas	166	7	10	7	21	47	54	20	88	53	8	2	...	1	...	...	1	1	3
Cerebro-spinal meningitis	10	4	4	2	...	...	...	...	10	100	6	4	1	...	1	...	...	...	...
Poliomyelitis	3	...	2	...	...	1	...	...	2	67	1	...	...	...	...	...	1	...	...
Malaria	3	...	...	...	...	2	1	...	3	100	...	...	...	...	...	...	...	...	...
Dysentery	8	...	...	...	1	4	3	...	6	75	...	...	...	...	...	...	...	...	...
Encephalitis lethargica	9	...	...	3	3	1	2	...	3	33	6	...	...	...	...	...	2	4	...
Polio-encephalitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ophthalmia neonatorum	35	35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS	2,219	78	387	924	218	323	196	93	1,483	67	357	58	15	21	27	12	50	91	83

Pulmonary tuberculosis	(42) 498	...	6	52	158	177	93	12	Pulmonary tuberculosis	336	...	1	...	6	78	143	91	17
Tuberculosis of the central nervous system	(14) 12	1	5	4	2	...	...	...	Other tuber-culous diseases	54	6	2	9	11	11	10	4	1
,, ,, intestines and peritoneum	24	...	5	12	3	3	1	...										
,, ,, vertebral column ...	11	...	...	3	2	4	2	...										
,, ,, other bones and joints ...	(2) 25	1	3	9	4	5	2	1										
,, ,, other organs	(13) 67	...	8	31	16	8	4	...										
TOTALS	†(71) 637	2	27	111	185	197	102	13		390	6	3	9	17	89	153	95	18

† Cases coming to the knowledge of the M.O.H. otherwise than by notification (not included in totals of notifications).

1933.

Notifications of infectious disease in registration sub-districts and in quarters. (Port cases excluded).

1932	NOTIFIABLE DISEASES	Total	TOTAL CASES NOTIFIED IN EACH DISTRICT.								NOTIFIED IN EACH QUARTER				Attack rate per 1,000	Port Cases
			Ashley	Bristol South	Bristol Central	Clifton	St. George	Stapleton	Westbury-on-Trym	Public Insts	1st	2nd	3rd	4th		
..	Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	Plague	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
533	Diphtheria (including membranous croup)	639	67	193	77	92	84	45	54	32	137	140	167	195	1.56	1
136	Erysipelas	166	17	47	19	11	30	17	11	14	40	39	31	56	.41	..
637	Scarlet fever	770	84	160	59	36	226	106	89	10	196	240	131	203	1.88	..
..	Typhus fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16	Enteric fever	11	..	3	1	1	4	..	..	2	1	1	3	6	.03	..
..	Relapsing fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	Continued fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16	Cerebro-spinal meningitis	10	..	5	2	..	2	1	..	..	4	3	1	2	.02	..
7	Poliomyelitis	3	..	1	1	..	..	..	1	..	1	..	2	..	.007	..
290	Acute primary pneumonia	321	33	95	37	23	65	39	24	5	146	64	29	82	.78	..
126	,, influenzal pneumonia	193	15	43	15	18	54	32	8	8	173	2	1	17	.47	..
4	Malaria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
128	Dysentery	7	..	1	..	..	1	3	1	1	3	..	3	1	.02	1
7	Acute encephalitis lethargica	9	1	1	2	..	2	2	1	..	2	3	1	3	.02	..
..	Acute polic-encephalitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14	Puerperal fever	4	..	3	..	..	..	..	..	1	1	1	2	..	.01	..
44	Puerperal pyrexia.. ..	46	5	6	2	5	5	2	2	19	14	8	15	9	.11	..
40	Ophthalmia neonatorum	35	3	4	9	3	12	3	1	..	12	9	8	6	.09	..
452	Pulmonary tuberculosis .. (42)	496	42 (8)	138 (11)	45 (4)	44 (5)	121 5,	73 (8)	28 (1)	5	133 (13)	148 (15)	112 (5)	103 (9)	1.21	2
13	Tuberculosis of central nervous systems .. (14)	12	1 (2)	3 (1)	2 (1)	.. 1)	3 4)	2 (3)	1 2;	..	4 (3)	5 (6)	2 (3)	1 (2)	.03	..
24	Tuberculosis of intestines and peritoneum ..	24	2	5	2	1	5	5	2	2	4	6	4	10	.06	..
13	Tuberculosis of vertebral column	11	1	4	1	2	1	1	1	..	..	4	2	5	.03	..
19	Tuberculosis of other bones and joints .. .. (2)	25	6	5 (1)	1	3	6 (1)	4	..	..	4	5	8 (1)	8 (1)	.06	..
79	Tuberculosis of other organs (13)	67	9 (4)	27 (3)	2	4 (4)	15 (1)	6	3 (1)	1	35 (6)	14 (1)	7 (1)	11 (5)	.16	..
2,599	TOTALS .. * (71)	2,849	281 (14)	744 (16)	277 (5)	243 (10)	636 (11)	341 (11)	227 (4)	100	910 (22)	692 (22)	529 (10)	718 (17)	6.96	7

* Cases coming to the knowledge of the M.O.H. otherwise than by notification (not included in totals of notifications).

Smallpox.

No case of smallpox was reported in Bristol during the year 1933 and the city has remained free of this disease since two cases of the mild type occurred in 1929. The attack rate for England and Wales was .02 per 1,000 population. The medical officers of the department are available for consultation in doubtful cases and I welcome co-operation in this way. One difficult case was seen with the doctor in attendance during the year and diagnosed as chickenpox.

Vaccination.

There has been no change in the local arrangements described in my report for 1930 for dealing with vaccination. During the year Mr. C. L. Bryant succeeded Mr. A. P. Tredwell as vaccination officer on the latter's death in February, and his office has since been removed from St. Peter's Hospital to the public health offices.

The city is divided into eight vaccination districts, a public vaccinator being appointed for each district, separate public vaccinators are also appointed for Southmead Hospital, and Eastville and Stapleton Institutions.

The various districts and public vaccinators are as follows :—

St. George	Dr. E. V. Foss
St. Philip & Jacob...	Dr. H. Hope Scott.
Ashley	Dr. J. A. L. Roberts.
Stapleton	Dr. H. Grey.
Clifton	Dr. E. U. Bartholomew.
Central	Dr. I. Williams.
Bristol South ...	Dr. G. S. Mundy.
Westbury-on-Trym ...	Dr. S. B. Green

The following table summarises the work of the public vaccinators and the vaccination officers for the last three years :—

Year	No. of births	Certificates of :				Persons successfully vaccinated at the cost of the rates (year ended 30th Sept.)			
		Primary vaccinations (all ages)	Statutory declarations	Postponements	Insusceptibility	Successful primary vaccination.			Re-vaccinations.
						Under 1 year	Over 1 year	Total	
1933	5,592	2,213	2,982	159	17	699	1,038	1,737	54
1932	6,065	2,166	3,131	205	22	730	550	1,280	38
1931	6,040	1,810	3,083	198	16	736	480	1,216	37

In addition during the year 1933, 56 re-vaccinations were registered by the vaccination officers. No contacts of cases of smallpox were vaccinated or re-vaccinated under the Public Health (Smallpox) Regulations, 1917.

Diphtheria (including Membranous Croup).

Year	No. of cases.					No. of deaths.					Case rate per 100,000	Death rate per 100,000	Fatality (case mortality %)
	Quarters.				Total	Quarters.				Total			
	1	2	3	4		1	2	3	4				
1924	235	159	122	463	979	24	9	5	25	63	253	16	6.4
1925	412	271	222	223	1,128	28	23	17	6	74	292	19	6.6
1926	231	171	135	174	711	15	8	11	9	43	185	11	6.0
1927	218	140	120	175	653	16	4	4	7	31	169	8	4.7
1928	158	127	118	196	599	3	4	3	7	17	153	4	2.8
1929	201	183	227	521	1,132	17	7	15	23	62	289	16	5.5
1930	600	246	250	388	1,484	24	3	4	10	41	375	10	2.8
1931	271	168	193	196	828	10	5	9	7	31	207	8	3.7
1932	149	69	98	227	533	6	3	6	7	22	132	5	4.1
1933	137	140	167	195	639	9	2	5	6	22	156	5	3.4

Diphtheria.

Although the number of diphtheria cases reported increased by 106 compared with 1932, the number of deaths remained the same : 22. The case mortality fell from 4.1 per cent. to 3.4 per cent. Full credit for this decline in fatality may be attributed to modern hospital treatment, as no less than 99 per cent. of the total cases notified were admitted to hospital for treatment, a fact which emphasises the wisdom of prompt removal in cases of diphtheria. In 1932, 96 per cent. of the cases notified were removed to hospital.

Fifty-eight per cent. of the total cases notified in 1933 occurred amongst children of school age, and 25 per cent. amongst children under five years of age ; 95 per cent of the fatal cases were children under 15 years of age and 40 per cent. under five years of age.

The case rate per 1,000 population was 1.56 and the death rate .05 compared with 1.32 and .05 respectively last year. The corresponding rates for England and Wales are 1.18 and .06 per 1,000 population.

Diphtheria immunisation.

The most effective weapon in combating the disease is the protection afforded by the safe and efficient method of immunisation in early childhood by means of toxoid.

As stated in my report for 1930 the Health Committee have adopted this method and the course is available free of charge for all children of school age and under. Medical officers of the maternity and child welfare department hold clinics for this purpose for children under five. By arrangement with the Education Committee inoculations are given by the school medical staff at the schools and at their clinics, the Health Committee being responsible for all expense.

The following table shows the number immunised in 1933 at schools and centres (excluding the city isolation hospital at Ham Green) particulars of which are given in the report of the resident medical superintendent).

1932		Education department	M. & C.W. department	Total 1933
1,617	No. received full course ...	1,647	149	1,796
1,266	Observed after Schick testing	931	256	1,187
500 (39.4%)	Found negative after observation	675	143	818 (68.9%)

In addition 27 children were observed after a second course of immunisation and 24 were negative, making a total of 842 children immunised against diphtheria in 1933.

Thirty-four children contracted diphtheria in 1933 subsequent to receiving immunising injections, but no significance must be attached to this figure, as several had not had a full course, and others who had a full course had not been subsequently tested.

However, seven cases of diphtheria occurred in children who had been tested and declared negative subsequent to immunisation. The cases were as follows :—

Patient	Age		Preliminary Schick test (date)	Immunizing injections (dates)				Diphtheria onset 1933	Character of disease
	M.	F.		1st	2nd	3rd	Tested & found negative		
M.A.	...	11	...	21/11/30	24/ 2/31	9/ 4/31	27/11/31	2/ 2/33	Moderately severe
B.L.	...	11	...	2/ 5/30	23/ 5/30	28/ 8/30	11/12/30	12/ 3/33	Severe
G.H.	...	8	...	30/ 4/31	18/ 5/31	6/ 7/31	5/10/31	24/ 3/33	Nasal carrier
C.D.	...	7	...	4/12/31	29/ 1/32	25/ 2/32	24/ 6/32	7/ 5/33	Severe
K.S.	4¾	...	...	18/12/31	22/ 1/32	12/ 2/32	9/ 9/32	22/10/33	Very severe
I.S.	...	9	...	5/12/30	9/ 1/31	10/ 2/31	23/ 6/31	24/11/33	Very mild
J.R.	7	...	...	31/ 3/30	30/ 4/30	21/ 5/30	22/11/30	27/11/33	Nasal carrier

Up to the end of 1933, 6,651 children, ages 1-15 have been immunised and tested negative, and of these seven cases of diphtheria occurred in 1933, equivalent to an incidence rate of 1.05 per thousand compared with 529 cases of diphtheria amongst approximately 79,135 children, ages 1-15 in the city who had not been immunised, giving an incidence rate of 6.6 per thousand.

Supply of diphtheria antitoxin.

The local arrangements under which supplies of diphtheria antitoxin are available to medical practitioners were detailed in my report last year. The scheme, in addition to facilitating the immediate application of antitoxin in diphtheria and providing free issues to patients unable to pay for it, ensures a constant supply of fresh antitoxin at all times.

Erysipelas.

One-hundred-and-sixty-six (166) cases of erysipelas were reported during the year, of which 88 (53 per cent.) were removed to hospital for treatment. Eight deaths occurred including two under one year of age. The case mortality was 4.8 per cent. compared with 7.3 per cent. in 1932. The attack rate was .41 per 1,000 population compared with .45 for England and Wales.

Scarlet Fever.

Year	No. of cases.				Total	No. of deaths.				Total	Case rate per 100,000	Death rate per 100,000	Fatality (case mortality %)
	Quarters					Quarters							
	1	2	3	4		1	2	3	4				
1924	238	151	132	310	831	4	1	—	3	8	215	2.	0.9
1925	336	301	330	527	1,494	12	6	6	5	29	387	7.5	1.9
1926	359	181	199	212	951	6	2	—	1	9	248	2.	0.9
1927	245	297	329	562	1,433	—	—	1	1	2	371	0.5	0.1
1928	332	276	220	383	1,211	—	1	—	2	3	310	0.8	0.25
1929	337	211	202	358	1,108	1	3	2	2	8	283	2.	0.7
1930	281	177	145	208	811	2	—	—	—	2	205	0.5	0.25
1931	127	100	103	123	453	1	—	1	—	2	113	0.5	0.4
1932	100	104	106	328	637	1	—	—	2	3	160	0.7	0.5
1933	196	240	131	203	770	2	1	1	—	4	188	1.0	0.5

Scarlet fever.

The year under review was again noteworthy for a marked increase in the number of cases of this disease, and we appear to have commenced the upward trend of a cycle for this disease which from past records will take about ten years to complete a return to the level of 1931. Altogether 770 notifications and four deaths were recorded, as against 637 cases and three deaths in 1932, giving attack and death rates of 1.88 and .01 per 1,000 population compared with 3.21 and .02 for England and Wales.

Enteric fever.

Eleven cases of enteric fever were notified in the city during the year, including five paratyphoid B and one paratyphoid A infection. The cases, eight of which were confirmed bacteriologically, were were individualistic in distribution, except in an institution where two cases occurred and no outbreak developed. The fullest enquiries were made into all cases, but there is no evidence ascribing spread of the disease to any preventable cause. The attack and death rates were .03 and .004 per 1,000 population, the corresponding rates for England and Wales being .04 and .01.

Cerebro spinal fever.

During the year, 10 cases of cerebro spinal fever, with six deaths, were recorded, against 16 cases and eleven deaths in 1932. Seven cases and four deaths occurred in the first and second quarters of the year. Prior to 1931 (when there were 19 cases and 15 deaths), the average annual number of cases for the previous twelve years was just over five. Five of the cases were confirmed bacteriologically. All were isolated cases, there being no instance of more than one case occurring in a house or institution. All cases were removed to hospital for treatment.

Poliomyelitis.

Three cases of this disease were notified during 1933 and two were removed to hospital for treatment. One death occurred. This is a decrease of four compared with the number recorded in 1932. Sixty-six per cent. of the total cases were children under five years of age.

Encephalitis lethargica.

Nine cases and six deaths of this disease were reported during the year, compared with seven cases and eleven deaths in 1932. From the history of the cases two of the notifications were chronic cases notified for the first time and seven acute. All except three acute cases were treated in their own homes.

The age distribution of the cases and deaths were :—

Age Groups	Cases	Deaths
1— 5	—	—
5—15	3	—
15—25	3	—
25—45	1	1
45—65	2	5
65—	—	—

Dysentery.

Seven (7) cases but no deaths from this disease were registered in 1933, against 128 cases and six deaths last year. No outbreak of this disease occurred in the mental institution during 1933. Five of the seven cases occurred in private homes (three in one house), the other two cases in two separate institutions.

Non-notifiable infectious diseases.

1932		QUARTERS				Total 1933
		1st	2nd	3rd	4th	
	CASES—					
290	Measles ...	471	1,136	493	303	2,403
14	German measles	5	16	2	7	30
1,406	Whooping cough	175	117	92	153	537
1,179	Mumps ...	1,503	725	74	53	2,355
1,447	Chicken-pox ...	279	270	78	136	763
4,336	Total ...	2,433	2,264	739	652	6,088
	DEATHS—					
2	Measles ...	5	7	1	1	14
—	German measles	—	—	—	—	—
31	Whooping cough	8	3	4	1	16
—	Mumps ...	—	—	—	—	—
—	Chicken-pox ...	—	—	—	—	—
33	Total ...	13	10	5	2	30

The only figures available relative to the number of cases of non-notifiable infectious disease are those obtained from school cards and from returns of cases discovered in the homes by nurses and health visitors.

Whooping cough and chicken pox show decreased numbers compared with 1932, but increases are recorded in the case of measles, german measles and mumps.

Measles.

Two thousand four hundred and three (2,403) cases were reported as compared with 290 in 1932 and 2,772 in 1931. Similarly the deaths rose from two to fourteen (11 under 4 years of age). 129 cases were removed to hospital.

Broncho-penumonia was as usual the commonest complication associated with measles, 26 cases suffering from these conditions in homes where the facilities for nursing were inadequate being removed to Ham Green hospital for treatment, where five cases proved fatal.

Epidemics of measles usually occur in cycles and Bristol having enjoyed comparative immunity for about two years, the expected recrudescence of the disease duly arrived in the second quarter of the year when 1,136 cases were reported, but the time of the year and the weather were so favourable that the outbreak was not as serious as in former years.

German measles.

Thirty cases of this disease were reported, against 14 in 1932. There were no deaths.

Whooping cough.

Whooping cough was considerably less prevalent in the city in 1933 than in the previous year, 537 cases being reported. Sixteen deaths occurred, all of them under the age of four years. The corresponding figures for 1932 were 1,406 cases and thirty one deaths. Twenty nine cases were admitted to hospital, seven proving fatal.

Mumps.

This disease again showed a marked increase in the number of cases reported—2,355 (previous year, 1,179). There were no deaths. The heaviest incidence occurred in the first quarter when 1,503 cases were reported.

Chickenpox.

The case incidence of chickenpox showed a marked decline compared with last year, 763 cases being reported against 1,447. The disease as usual was more prevalent in the winter months.

Work of the home nurses.

Three trained nurses are employed to visit homes in connection with infectious diseases. These nurses visit all cases of notifiable and non-notifiable infections, and their duties were described in my report for 1930.

The following table gives the number of cases visited by these nurses during 1933 :—

Scarlet fever	780
Diphtheria	607
Enteric fever	9
Encephalitis lethargica	9
Anterior poliomyelitis	4
Polio encephalitis	—
Cerebro-spinal fever	9
Malaria	—
Dysentery	4
Erysipelas	155
Measles	2,424
Whooping cough	618
Chicken pox	703
Mumps	1,660
German measles	21
Total cases	7,003

Twenty-six enquiries regarding infectious disease were also made by district sanitary inspectors.

Influenza and respiratory diseases (excluding pulmonary tuberculosis).

Deaths at ages and in quarters.

Deaths.	Under 1	1-5	5-15	15-25	25-45	45-65	65-	Total 1933	Quarters			
									1st	2nd	3rd	4th
Influenza	3	6	5	8	43	87	140	292	267	6	4	15
Bronchitis	3	2	1	—	6	30	136	178	115	18	10	35
Pneumonia	52	26	9	4	27	84	80	282	122	51	22	87
Other respiratory diseases	1	3	1	1	4	16	68	94	40	22	7	25
Total	59	37	16	13	80	217	424	846	544	97	43	162
NOTIFICATIONS Primary pneumonia	16	48	39	41	71	70	36	321	146	64	29	82
Influenzal pneumonia	—	2	9	26	67	52	37	193	173	2	1	17
TOTAL	16	50	48	67	138	122	73	514	319	66	30	99

The group of diseases included in the table above again contributed largely to the death rate, the number of deaths from these diseases representing 17.2 per cent. or roughly one in six of all deaths, compared with 14.3 per cent. in 1932.

There was an epidemic of influenza in the first quarter of the year and this increased the figures for these diseases for 1933. A sharp rise in the incidence of respiratory deaths and pneumonia notifications occurred in the early months of the year and it became necessary to set aside wards at Ham Green hospital for the treatment of cases where the home facilities for nursing were inadequate. Eighty three such cases were removed to hospital, of which twenty eight proved fatal.

As usual, the mortality from respiratory diseases was mainly amongst middle aged and elderly people—76 per cent. of the total deaths were of persons over 45 years of age. This ratio is less marked in pneumonia, the number of deaths in this age group falling to 58 per cent. mainly because of large number amongst infants under five years which accounted for about 28 per cent. of the total pneumonia deaths.

Heart disease.

Deaths, death-rates and percentage of age groups.

						Age groups, 1933.			
	1929	1930	1931	1932	1933	—15	—45	—65	+65
No. of deaths	1,018	878	996	1,060	1,156	5	61	267	823
Death rate per 1,000 population ...	2.61	2.25	2.49	2.62	2.82	.4	5.3	23.1	71.2

There were 1,156 deaths certified from heart disease during 1933, an increase of 96 over the number recorded last year, and more deaths were attributed to this disease than any other in the list of specified causes of death. Approximately one in four of the total deaths were ascribed to it, and the death rate was 2.82 per 1,000 compared with 2.62 in 1932.

The increase in heart deaths is closely associated with the high mortality from respiratory disease, previously referred to, by reason of the fact that in the classification of deaths, heart disease takes precedence over respiratory diseases other than influenza and pulmonary tuberculosis. Many deaths resulted from cardiac complications of respiratory diseases or *vice versa*, and in such cases the deaths would be classified under heart disease. This must be borne in mind when considering deaths from heart disease.

No less than 71 per cent. of the deaths classified to heart disease occurred amongst aged people over 65 years, and 28 per cent. between 45 and 65 years.

Cancer.

* *Deaths, death-rates and percentage in age groups.*

				Age Groups.				
1932		1933		—15	—25	—45	—65	+65
620	No of deaths ...	595	Male ...	2	—	16	117	143
1.54	Death rate per 1,000 population	1.45	Female	—	3	24	138	152
			% ...	0.3	0.5	6.8	42.8	49.6

* Registrar General's figures.

Cancer.

Cancer caused 595 deaths in Bristol last year, a decrease of 25 over the number recorded in 1932 : 317 amongst females and 278 amongst males. This year the decrease is greater amongst females (16) than males (9). For 1933 the death rate was 1.45 per 1,000 population, compared with 1.54 last year.

I append a brief report by the radium officer (Sylvia B. Wigoder, M.D.) on the work in 1933 of the national radium centre established at the Bristol Royal Infirmary for Bristol and South West of England. The Radium Sub-Committee of the Board of the Faculty of Medicine of the University of Bristol made a full report for the year on the work and results of the centre to the Radium Commission.

NATIONAL RADIUM CENTRE FOR BRISTOL AND SOUTH WEST OF ENGLAND.

Report by Sylvia B. Wigoder, M.D., Radium Officer.

Staff.

Medical officer, 1 ; clerk, 1.
Beds set aside for radium patients, 4, increasing to 10.
Average daily occupations, 8.

Radium loaned by Radium Commission ...	499.29 mgs.
,, owned by Hospital	200. mgs.
Radon used ...	506 mcs.
Area served ...	Somerset, Gloucestershire, Wiltshire.

The following are the statistics of the National Radium Centre at Bristol for the year 1933.

	Referred.		Treated.	
	Bristol	Not Bristol	Bristol	Not Bristol
Malignant ...	45	98	40	59
	143		99	
Non-malignant	44	47	32	34
	91		66	
Totals ...	234		165	

Malignant cases only.

Regions	No. referred	No. treated	No. alive at end of 1933	Percentage alive at end of 1933
Mouth and tongue	17	12	8	66%
Upper air passages	8	7	6	85%
Breast ...	17	7	6	85%
Female genital	41	33	25	76%
Rectum ...	4	—	—	—
General ...	56	40	36	90%
Totals ...	143	99	81	82%

Of the 81 malignant cases alive at the end of 1933 a further six died during the first four months of 1934.

It will be noticed that a large percentage of cases are not accepted for treatment. The reason for this is twofold. Firstly, of the 143 malignant cases referred, only 128 actually attend for examination, and secondly, it was felt to be unjustifiable to undertake treatment in cases so advanced that even palliation appeared impossible. Practically all the cases treated showed some improvement.

As a general rule even in advanced cases of mouth and tongue cancer, as a result of radium treatment, ulceration becomes less, swallowing easier, the odour may become less offensive and on the whole the patient's life rendered more bearable. The following cases are illustrative of this.

Case no. 102/33. Male, aged 63. *Date treated*, 31-5-33.

Carcinoma tongue.

Condition.—Entire anterior surface of tongue replaced by deep, foul, excavating ulcer.

For palliative treatment only.

20-6-33. Dramatic improvement. Tongue soft and mobile. Still excavated in centre.

16-8-33. X-ray treatment given for gland in right sub-maxillary region.

10-10-33. Carcinoma eventually pierced tongue. One of two severe haemorrhages. Acute adenitis of neck. Died.

Case no. 200/33. Male, aged 51. *Date treated*, 1-11-33.

Carcinoma naso-pharynx. Pathological report on gland, carcinomatous.

Symptoms. Lump on left side neck — 20 months.

Condition. Soft, pink, friable growth bleeding easily, but not excessively—attached to whole left lateral wall of of pharynx and growing on to posterior wall. Gland hard, slightly irregular but quite mobile near sterno-mastoid region.

14-12-33. Reaction passed. Mass in naso-pharynx nearly disappeared.

19-1-34. Block dissection of glands neck.

21-2-34. Died of septicaemia—erysipelas.

The following is the only case of mouth cancer accepted for treatment which did not respond to radium treatment. This case, apparently radio-resistant, is still alive, although he shows no appreciable improvement in his condition as a result of treatment. When admitted he showed an ulcerated growth about 2-3 cms. in diameter involving the right anterior faucial pillar and right tonsil and just commencing to involve the tongue. There was a small mobile gland in the right upper deep cervical group. His mouth was very foul and he was unable to swallow. Now 8 months afterwards he cannot open his mouth and has a deep sloughing ulcer involving the tonsil and angle of jaw, which is painful and foetid.

In practically all cases of cancer of the uterine cervix within six weeks of radium treatment, bleeding stops and discharge becomes much less profuse, although carcinoma of the uterine body does not respond quite so well to radium.

Case no. 20/33. Female, aged 48. *Date treated,* 21-4-33.

Carcinoma cervix. Treatment incomplete as did not come in for second treatment.

Symptoms. Bleeding—5 months.

Condition. Hard nodular growth mostly involving anterior lip of cervix spreading on to the anterior vaginal wall (probably involving base of bladder), spreading in to left fornix. Uterus practically completely fixed. Growth involved cervical canal (which was, however, dilatable) and spreading on to posterior lip.

23- 8-33. No evidence of growth.

23- 2-34. Died. P.M. findings ; no evidence of growth in vagina. Ureters involved and obliterated by growth just as they were crossing the brim of the pelvis. Death caused by uraemia caused by cancer.

Case no. 176/33. Female, aged 59. *Date treated,* 17-10-33.

Carcinoma cervix.

Symptoms. Bleeding and discharge—3 months.

Condition. Foul, fungating, friable growth which has almost destroyed the cervix and is spreading into the fornices. Uterine mobility, however, is still fair.

21-11-33. Died after severe haemorrhages.
P.M. findings. The growth itself extended well out into vagina but it was firm and there was hardly any evidence of sepsis or fungation. Some adhesions of intestines around uterus. Lungs pale and studded with secondary growths. Heart, kidneys and liver showed some fatty degeneration. Cause of death, haemorrhage following carcinoma cervix.

Cases such as the following are disappointing when the malignant condition disappears, but the patient dies of some frequently quite unrelated intercurrent condition.

Case no. 14/33. Male, aged 64. *Date treated,* 31-1-33.

Epithelioma arm.

Symptoms. Started as small sore after tar burn 1 year ago.

Condition. Typical epitheliomatous mass about 4 cms. in diameter on right arm. Not fixed to deep structures. No glands.

18-11-33. Lesion very much improved.

12- 2-34. Died. Heart trouble.

Case no. 187/33. Male, aged 63. *Date treated* 10-10-33.

Carcinoma prostate.

Symptoms. Acute retention.

Condition. (Bimanually) wooden hard prostate.

10-11-33. Died, nephritis.

TUBERCULOSIS.

1932	STATISTICS	Pulmonary	Non-pulmonary	Total 1933
674	New cases	540	168	708
1.67	Attack rate per 1,000 population	1.34	.41	1.55
4,153	Total on Register... ...	2,954	909	3,863
3,262	Dispensary patients ...	2,481	728	3,209
12,156	Dispensary attendances ...	—	—	10,990
603	Sanatoria discharges ...	510	140	650
334	Deaths	336	54	390
.83	Death rates per 1,000 population	.82	.13	.95

COMPARATIVE RATES PER 1,000 POPULATION.

City of	Per 1,000 population all causes	
	Case rate	Death rate
Birmingham	1.47	.96
Liverpool	3.39	1.33
Manchester	1.80	1.15
Sheffield	3.16	.83
Leeds	1.61	1.03
Bristol	**1.55**	**.95**
Bradford	1.45	.88
West Ham	1.9	1.1
Nottingham	1.03	1.02
Portsmouth	1.6	.79
Cardiff	1.78	1.26
Plymouth	1.50	.97

Cases.

During the year under review 708 fresh cases of tuberculosis came to the knowledge of the department, an increase of 34 compared with 1932. Of these 637 were duly notified under the regulations. Pulmonary cases numbered 540, or 76 per cent. of the total. Sanatorium admissions numbered 771 ; 38 more than in the previous year. There were no cases of wilful neglect or refusal to notify. Until this year the number of cases had been steadily falling since 1918. The average annual number notified during the past four years is less than half the number registered in the war years, viz. :—

Average	Pulmonary tuberculosis.	Other forms of tuberculosis.
1914/1918 ...	1,238	307
1930/1933 ...	522	123

Compared with the large cities, Bristol is in a favourable position as regards the death rate from tuberculosis, the only towns with improved rates being Portsmouth and Bradford.

The total number of names on the tuberculosis register on December 31st was 3,863, a decrease of 290 on the number registered on the same date in 1932. 3,209 of these cases were under supervision at the tuberculosis dispensaries. Thirty-three grants of milk (one quart per day) were made to tuberculous patients on the recommendation of the tuberculosis officer.

Deaths.

The number of deaths from all forms of tuberculosis rose by 56 to 390, including 336 cases of respiratory tuberculosis. The death rate was .95 per 1,000 of which respiratory tuberculosis was responsible for .82 ; the corresponding figures for the previous year being .83 and .73 per 1,000. The attack rate for the year was 1.55 per 1,000 population which gives Bristol fifth place amongst the twelve large provincial cities included in the comparative table at the head of this report.

The ration of non-notified tuberculosis deaths to total tuberculosis deaths compared with 1932 is seen below.

	Males.		Females.	
	1933	1932	1933	1932
Pulmonary ...	1 in 12.2	1 in 12.7	1 in 15.3	1 in 12.8
Non-pulmonary	1 in 2.5	1 in 3.1	1 in 2.3	1 in 2.1

Public Health (Prevention of Tuberculosis) Regulations, 1925.

Under these regulations any person suffering from tuberculosis of the respiratory tract, and in an infectious state, shall not enter upon any employment or occupation in connection with a dairy, which would involve the milking of cows, treatment of milk, or the handling of vessels used for the containing of milk, and the Council may call upon such person to discontinue his employment.

No case requiring action under these regulations came to the notice of the department during the year.

Public Health Act, 1925. *Section* 62.

Under this Act an order may be made by a court of summary jurisdiction for the removal to hospital of any person suffering from pulmonary tuberculosis in an infectious state, where it can be proved that the accommodation provided for such person is such that proper precautions to prevent the spread of infection cannot be taken, or that such precautions are not being taken, and that serious risk of infection is thereby caused to other persons.

The necessity of applying to a court for an order under this Act did not arise during the year.

The tables which follow give particulars by age groups of all new cases and deaths from tuberculosis in the area (including port cases) during 1933 and by annual totals for the years 1923-1933 ; deaths classified according to occupations ; sanatoria admissions and discharges ; and the extent of residential treatment during the year In addition there is the report of the tuberculosis officer which details in tabular form particulars of the work performed at the dispensaries and in the homes by the staff employed in this section, including returns showing the number of cases examined and treated and the immediate results of treatment of patients discharged from residential institutions during the year

New cases and mortality during 1933.

Age periods	New cases				Deaths			
	pulmonary		non-pulmonary		pulmonary		non-pulmonary	
	M.	F.	M.	F.	M.	F.	M.	F.
0	—	—	6	1	—	—	5	1
1	4	2	20	8	1	—	9	2
5	19	12	23	18	—	—	2	3
10	15	9	13	14	4	2	4	2
15	26	44	3	10	4	20	1	6
20	50	43	5	11	28	26	3	1
25	51	67	5	11	38	45	4	2
35	37	38	1	5	32	28	1	3
45	45	27	4	3	43	18	3	—
55	23	10	4	—	23	7	1	—
65 and upwards	7	11	—	3	10	7	—	1
Totals ...	277	263	84	84	183	153	33	21
Ratio of non-notified deaths					1–12.2	1–15.3	1–2.5	1–2.3

NOTIFICATIONS AND DEATHS FROM PULMONARY AND OTHER FORMS OF TUBERCULOSIS, 1924-1933.

Year	Cases, Deaths, with attack and death rate per 1,000	Pulmonary tuberculosis	Other forms of tuberculosis
1924	Notifications etc. ... Deaths	797 (2.06) 364 (0.94)	203 (0.52) 73 (0.18)
1925	Notifications, etc. ... Deaths	742 (1.92) 367 (0.95)	173 (0.44) 98 (0.25)
1926	Notifications, etc. ... Deaths	754 (1.94) 374 (0.97)	195 (0.50) 60 (0.15)
1927	Notifications, etc. ... Deaths	783 (2.28) 397 (1.03)	180 (0.46) 67 (0.17)
1928	Notifications, etc. ... Deaths	704 (1.80) 338 (0.86)	177 (0.45) 51 (0.13)
1929	Notifications, etc. ... Deaths	620 (1.58) 402 (1.02)	177 (0.45) 63 (0.16)
1930	Notifications, etc. ... Deaths	610 (1.55) 396 (1.01)	106 (0.27) 57 (0.14)
1931	Notifications, etc. ... Deaths	613 (1.53) 358 (0.89)	152 (0.38) 48 (0.12)
1932	Notifications, etc. ... Deaths	506 (1.25) 294 (0.73)	168 (0.42) 40 (0.10)
1933	Notifications, etc. ... Deaths	540 (1.34) 336 (0.82)	168 (0.41) 54 (0.13)

DEATHS FROM ALL FORMS OF TUBERCULOSIS OCCURRING IN 1933 CLASSIFIED ACCORDING TO OCCUPATION.

Occupation	Deaths	
	Number	Percentage of total deaths
House workers	99	25.38
Labourers ...	41	10.51
Shop assistants	30	7.69
Outdoor workers	30	7.69
No occupation...	28	7.18
Clerks, typists, etc.	22	5.64
School age ...	21	5.38
Various ...	20	5.13
Metal workers ...	18	4.62
Infants ...	17	4.36
Food trades, etc.	12	3.08
Tobacco workers	9	2.31
Seamen ...	8	2.05
Printers ...	7	1.79
Leather workers	6	1.54
Wood workers	6	1.54
Tailors ...	6	1.54
Textile workers	4	1.03
Teachers ...	3	0.77
Nurses ...	3	0.77
Total ...	390	100.00

Sanatoria available for in-patient treatment, 1933.

	No. of Beds	Admitted. M.	Admitted. F.	Admitted. T.	Discharged or Transferred. M.	Discharged or Transferred. F.	Discharged or Transferred. T.	Died. M.	Died. F.	Died. T.
PULMONARY—EARLY CASES.										
Winsley Sanatorium, nr. Bath	58	95	73	168	87	74	161	2	—	2
*Ham Green Sanatorium, Pill, near Bristol	72	56	66	122	107	96	203	52	39	91
PULMONARY AND NON-PULMONARY—ADVANCED CASES.										
*Ham Green Sanatorium	64	89	63	152						
*Southmead Hospital	68	88	80	168	56	67	123	37	13	50
PULMONARY AND NON-PULMONARY—CHILDREN (under 16).										
*Frenchay Park Sanatorium, Frenchay, nr. Bristol	96	86	59	145	78	67	145	4	..	4
NON-PULMONARY CASES.										
Cossham Hospital, Kingswood, Bristol	9	3	9	12	1	8	9	1	..	1
	Totals	417	350	767	329	312	641	96	52	148

During the year the following cases were also admitted to and discharged from various outside institutions :

		Admitted. M.	Admitted. F.	Admitted. T.	Discharged or Transferred. M.	Discharged or Transferred. F.	Discharged or Transferred. T.	Died. M.	Died. F.	Died. T.
PULMONARY.										
Quantock Sanatorium	Cases transferred on extension of City boundaries 1-4-33.	..	1	1	..	1	1	..	..	..
Taunton Sanatorium		1	1	2	1	1	2	..	..	..
Compton Bishop Children's Home		..	1	1	..	1	1	..	..	..
Totals		1	3	4	1	3	4	..	..	..
Grand Totals		418	353	771	330	315	645	96	52	148

* Institution belonging to the Council.

Tuberculosis Dispensaries.

Report by C. J. Campbell Faill, F.R.C.P., Ed.,
Tuberculosis Officer.

Situation of dispensaries—

19 Portland Square, and 4 Redcliffe Parade West.

The use of no. 19 Portland Square as a tuberculosis dispensary will be discontinued in March, 1934.

Summary for year 1933.

Three thousand one hundred and sixty (3,160) old and new patients were examined at the dispensaries during the year. The following summary shows the initial treatment recommended for these cases :—

	New patients	Old patients
Sanatorium treatment	513	294
Dispensary treatment	15	118
Supervision and observation	82	816
Light treatment	14	34
Domiciliary treatment	17	218
No treatment required	698	341
Total ...	1,339	1,821

Total number of examinations	4,959
Total attendances of school children	3,369
Total injections	328
Artificial pneumothorax	356
No. of visits to patients by tuberculosis nurses and health visitors	5,854
No. of cases seen by consulting surgeon	127
No. of attendances of cases seen by consulting surgeon... ...	201
No. of cases seen by ear, nose and throat surgeon	56
No. of attendances of cases seen by ear, nose and throat surgeon	117
No. of attendances for ultra-violet light treatment	1,843

Eight hundred and sixty three (863) children of school age were examined during the year. Of these, 505 were old cases attending for re-examination and 358 were new cases. Of the latter, 12.3 per cent. were diagnosed as definite cases of tuberculosis, 2.2 per cent. as suspects, and 85.5 per cent. as non-tuberculous. The total number of examinations of school-children was 1,329.

Of the total deaths in the city from all forms of tuberculosis, 37 per cent. occurred in sanatoria or hospitals controlled by the public health authority.

For many years past the Health Committee has loaned shelters to tubercular patients who possess suitable gardens for their erection. These shelters are regularly inspected and kept in repair. At the end of the year, 12 shelters were in use.

In Bristol there have always been a greater number of acute young adult cases each year than one would expect in an urban population. These are particularly distressing cases, as in the past a very large proportion have died within twelve months in spite of all treatment. Although there is no increase in these cases, the numbers are not decreasing as in the other types of tuberculosis.

The use of *Crisalbine*, followed in many cases by artificial pneumothorax has immensely increased the expectation of life for these young adults.

One feature of 1933 was the large number of very acute cases seen in the last three months of the year. In two of these cases, both male, so far as could be discovered from very careful questioning, the whole illness lasted less than four weeks. One cannot help thinking that the adoption of summer-time contributes to the incidence of acute young adult phthisis, as in many cases it would seem that adolescents who have started work do not get sufficient rest.

The number of patients attending for refill of an artificial pneumothorax is steadily increasing, and the excellent results quite justify the extra work involved. In future, these refills will be done at Southmead Hospital and not in the dispensary.

During the year the *Tuberculosis Voluntary Care Committee* has greatly increased its responsibilities and usefulness by an extension of the scheme for the employment of consumptive patients. An up-to-date workshop with offices adjoining was erected at Southmead and presented to the committee ; and in July the building was opened by Her Grace the Duchess of Beaufort. The trading name of *Bristol Appliances Ltd.* has been adopted.

Nine patients are at present continuously employed in the manufacture, delivery, and erection of portable buildings such as garages, greenhouses, poultry houses, etc.

It is realised that this work is only suitable for certain patients, and the committee hopes to be in a position at a later date to extend the scheme still further by introducing the manufacture of other articles in the workshop. The committee is faced with the difficult task of providing suitable employment for semi-disabled adults with no previous experience, paying them as high a wage as possible, selling the manufactured articles at competitive prices, and introducing a minimum amount of machinery, so as to provide employment for as many patients as possible.

The After-Care Committee of the Voluntary Care Committee continues to make a valuable contribution to the welfare of consumptive patients by assisting them in various ways. Some patients require clothing prior to admission to sanatorium, others travelling expenses to enable them to attend the dispensary for treatment. Beds and bedding are frequently purchased and issued to patients to enable them to have separate sleeping accommodation. It sometimes happens that patients are quite anxious to undergo sanatorium treatment, but are prevented owing to their inability to pay their rent during the time they are away from home. The After-Care Committee gives sympathetic consideration to applications of this nature.

The committee is always ready to offer advice to consumptive patients and to assist them to overcome their difficulties.

Return showing the work of the Dispensaries during the year 1933.

DIAGNOSIS	PULMONARY.				NON-PULMONARY.				TOTAL.				GRAND TOTAL.
	adults		children		adults		children		adults		children		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
A.—NEW CASES examined during the year (excluding contacts) :													
(*a*) Definitely tuberculous	195	186	25	18	13	21	33	31	208	207	58	49	522
(*b*) Diagnosis not completed	..	..	..	..	..	..	..	..	3	1	8	4	16
(*c*) Non-tuberculous ..	..	..	..	..	..	..	..	..	106	112	69	40	327
B.—CONTACTS examined during the year :—													
(*a*) Definitely tuberculous	3	13	2	4	1	1	6	..	4	14	8	4	30
(*b*) Diagnosis not completed	..	..	..	..	..	..	..	..	..	..	..	2	2
(*c*) Non-tuberculous ..	..	..	..	..	..	..	..	..	76	112	125	129	442
C.—CASES written off the dispensary register as :—													
(*a*) Recovered	62	104	6	5	14	9	8	7	76	113	14	12	215
(*b*) Non-tuberculous ..	..	..	..	..	..	..	..	..	204	241	227	199	871
D.—NUMBER OF CASES on dispensary register on December 31st :—													
(*a*) Definitely tuberculous	1079	1040	218	144	128	167	235	198	1207	1207	453	342	3209
(*b*) Diagnosis not completed	..	..	..	..	..	..	..	..	3	2	8	6	19

1. Number of cases on Dispensary Register on January 1st ..	3,291	2. Number of cases transferred from other areas and cases returned after discharge under head 3 in previous years	203
3. Number of cases transferred to other areas, cases not desiring further assistance under the scheme, and cases " lost sight of " ..	177	4. Cases written off as dead during the year (all causes)	342
5. Number of attendances at the Dispensaries (including contacts) ..	10,990	6. Number of Insured Persons under domiciliary treatment on 31st December	311
7. Number of consultations with medical practitioners : (*a*) Personal .. .. (*b*) Other	 28 1,166	8. Number of visits by tuberculosis officers to homes (including personal consultations) ..	404
9. Number of visits by nurses or health visitors to homes for dispensary purposes	*5,854	10. Number of : (*a*) Specimens of sputum, etc., examined .. .. .. (*b*) X-ray examinations made in connection with dispensary work	 1,070 1,820
11. Number of " recovered " cases restored to dispensary register and included in A (*a*) and A (*b*) above	5	12. Number of " T.B. plus " cases on dispensary register on December 31st	743

* Including Public Health (Tuberculosis) visits.

Return showing the immediate results of treatment of definitely tuberculous patients discharged from residential institutions during the year 1933.

Classification on admission to the Institution.		Condition at time of discharge.	Duration of residential treatment in the institution.															Grand Totals
			Under 3 months			3—6 months.			6—12 months.			More than 12 months			Totals			
			M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
PULMONARY TUBERCULOSIS	Class T.B. minus.	Quiescent	17	26	8	29	23	17	10	2	12	5	3	6	61	54	43	158
		Not Quiescent ..	8	9	4	4	6	2	1	2	3	..	1	..	13	18	9	40
		Died in institution	8	4	1	2	..	..	..	2	..		..	..	10	6	1	17
	Class T.B. plus group 1.	Quiescent	1	2	1	..	2	..	1	..	..	..	..	..	2	4	1	7
		Not Quiescent ..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1
		Died in institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Class T.B. plus group 2.	Quiescent	8	3	1	9	9	..	4	3	..	2	1	..	23	16	1	40
		Not Quiescent ..	2	5	..	11	5	..	3	1	..	1	..	1	17	11	1	29
		Died in institution	1	..	..	..	..	..	2	1	..	1	1	..	4	2	..	6
	Class T.B. plus group 3.	Quiescent	4	2	..	12	9	..	11	4	..	3	3	..	30	18	..	48
		Not Quiescent ..	29	25	..	25	29	..	17	10	..	6	8	..	77	72	..	149
		Died in institution	47	24	1	12	4	..	3	7	..	4	4	..	66	39	1	106
NON-PULMONARY TUBERCULOSIS	Bones and joints.	Quiescent	3	1	3	4	5	3	2	6	3	1	1	15	10	13	24	47
		Not Quiescent ..	..	4	..	..	..	1	..	1	..	..	..	..	..	5	1	6
		Died in institution	..	..	..	..	..	..	3	..	..	1	..	3	4	..	3	7
	Abdominal	Quiescent	1	1	3	..	2	4	1	..	4	..	..	2	2	3	13	18
		Not Quiescent ..	..	..	2	1	1	..	..	..	..	..	..	..	1	1	2	4
		Died in institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Other organs	Quiescent	..	..	..	1	..	..	1	..	..	..	..	..	2	..	..	2
		Not Quiescent ..	..	2	..	..	..	..	..	1	..	..	..	..	..	3	..	3
		Died in institution	3	1	2	..	..	..	..	..	..	..	..	..	3	1	2	6
	Peripheral glands	Quiescent	..	4	6	..	..	7	..	..	2	..	..	..	..	4	15	19
		Not Quiescent ..	..	1	..	..	1	2	..	..	1	..	..	..	..	2	3	5
		Died in institution	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	1

Return showing the results of observation of doubtfully tuberculous cases discharged from residential institutions during the year 1933.

Diagnosis on discharge from observation.	Pulmonary Tuberculosis						Non-Pulmonary Tuberculosis						Totals.		
	Stay under 4 weeks.			Stay over 4 weeks.			Stay under 4 weeks.			Stay over 4 weeks.					
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.
Tuberculous	...	...	...	...	1	...	...	...	...	...	1	...	...	2	...
Non-tuberculous	†1	4	1	††4	**5	19	1	1	3	*2	7	21	8	17	44
Doubtful	...	...	...	2	1	...	...	...	...	...	...	...	2	1	...
Totals	1	4	1	6	7	19	1	1	3	2	8	21	10	20	44

* One case died—toxaemia-osteomyelitis of trochanter.
** ,, ,, ,, —pulmonary embolism.
** ,, ,, ,, —neoplasm of lung.
† ,, ,, ,, —mediastinal neoplasm.
†† ,, ,, ,, — ,, ,,

Report on Artificial Light Treatment.

Types of lamps used :—

Ajax Tungsten Arc—5 amps.
Hewettic Quartz Mercury Vapour—7 amps.
Hanovia Quartz Lamp—2.5 amps.
Direct Current—250 volts.

RESULTS OF ARTIFICIAL LIGHT TREATMENT.

Disease.	Under treatment end of 1932	New cases	Discharged				Ceased to attend	Under treatment end of 1933
			Quiescent	Much improved.	Improved.	Stationary.		
Bones and joints (sinus) ...	4	10	2	2	1	—	2	7
Adenitis (sinus)	6	7	7	1	1	—	—	4
,, (no sinus)	3	3	—	2	—	1	—	3
Peritonitis ...	5	3	2	—	2	1	—	3
Lupus	4	2	2	—	1	—	1	2
Ischio-rectal abscess (+ Pulm. T.B.)	1	3	—	1	—	2	—	1
Larynx	2	1	—	—	—	2	—	1
Asthma (+ Pulm. T.B.)	—	1	—	1	—	—	—	—
Total ...	25	30	13	7	5	6	3	21

Of the small number of patients suffering from surgical tuberculosis who have been treated with ultra-violet light, 80 per cent. of the total number of cases completing treatment have improved as a result of this treatment.

As in previous years, cases of adenitis with sinus formation have again shown remarkably good results.

The average duration of treatment has been :—

Bones and joints ...	7—8 months.
Adenitis	8—9 months.
Abdomen	6 months.

The average gain in weight of quiescent cases is 5 lbs.

VENEREAL DISEASES.

1932	Treatment centre.	1933
1,075	New patients	1,039
239	Syphilis	236
3	Soft chancre	5
419	Gonorrhoea	458
414	Non-venereal	340
2,574	Total patients	2,172
50,519	Total attendances	53,988
1,084	Under treatment at end of year	872
874	Syphilis	707
0	Soft chancre	0
210	Gonorrhoea	165
4,839	Intravenous injections of salvarsan substitute	5,906
92	Inpatients	70

There has been no change in the local arrangements for the treatment of venereal disease, as set forth in my report for 1930. In the tables which follow, the medical director of the treatment centre (S. Hardy Kingston, M.B., Ch.B., D.P.H.) gives full particulars of the numbers, types, treatment, pathological examinations and attendances from each area for the year 1933. The number of new patients showed a decrease of 36 on the previous year, while the number of patients treated declined by 402. Attendances, however, again increased by 3,469 to 53,988, including attendances made by 340 non-venereal cases under the routine system of examination whenever possible of members of the family of true cases. A large proportion of these family examinees were found to be free of the disease. At the end of the period under review 872 patients remained under treatment at the centre. During the year intravenous injections of salvarsan substitute increased by 1,067 and 70 patients were admitted to the institution for residential treatment (34 women and 36 men).

Twenty-six (26) medical practitioners in the city are recognised for the purpose of obtaining free of charge from the Corporation approved substitutes for salvarsan and 561 specimens were submitted by private practitioners for examination at the laboratory of the department of preventive medicine at the Bristol University. Forty eight (48) meetings were addressed during the year by members of the panel of lecturers kept by the medical officer of health. Arrangements have been made to co-operate with the British Social Hygiene Council in the exhibition of the health educational dramatic talking picture "Damaged Lives" at the Bristol Hippodrome for two weeks commencing February 26th, 1934.

The staff at the treatment centre remains as previously published, viz. :—medical director, four assistant medical officers, one sister, four nurses, three domestic staff and two orderlies.

Venereal Disease Clinic.

Statement showing the services rendered at the treatment centre during the year 1933.

	Syphilis		Soft Chancre		Gonorrhoea		Conditions other than Venereal		TOTALS		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Totals
1. Number of cases on 1st January under treatment or observation	594	280	..	..	123	87	..	..	717	367	1,084
2. Number of cases removed from the register during any previous year which returned during the year under report for treatment or observation of the same infection ..	5	1	..	..	41	2	..	..	46	3	49
3. Number of cases dealt with for the first time during the year under report (exclusive of cases under item 4) suffering from :—											
Syphilis, primary	82	4	..	..	..	..	..	..	82	4	86
" secondary	3	10	..	..	..	..	..	..	3	10	13
" latent in 1st year of infection	5	4	..	..	..	..	..	..	5	4	9
" all later stages ..	41	32	..	..	..	..	..	..	41	32	73
" congenital	9	12	..	..	..	..	..	..	9	12	21
Soft Chancre	..	..	4	..	..	..	..	..	4	..	4
Gonorrhoea, 1st year of infection	..	..	..	..	316	70	..	..	316	70	386
" later..	..	..	..	..	15	12	..	..	15	12	27
Conditions other than venereal ..	..	..	..	..	..	..	261	79	261	79	340
4. Number of cases dealt with for the first time during the year under report known to have received treatment at other Centres for the same infection	33	1	1	..	45	..	..	..	79	1	80
TOTALS OF ITEMS 1, 2, 3 AND 4..	772	344	5	..	540	171	261	79	1,578	594	2,172
5. Number of cases discharged after completion of treatment and final tests of cure	15	7	1	..	171	25	261	79	448	111	559
6. Number of cases which ceased to attend before completion of treatment and were, on first attendance, suffering from :—											
Syphilis, primary	37	5	..	..	..	..	..	..	37	5	42
" secondary	6	10	..	..	..	..	..	..	6	10	16
" latent in 1st year of infection	2	..	..	..	..	..	..	..	2	..	2
" all later stages ..	35	28	..	..	..	..	..	..	35	28	63
" congenital	2	21	..	..	..	..	..	..	2	21	23
Soft Chancre	..	..	2	..	..	..	..	..	2	..	2
Gonorrhoea, 1st year of infection	..	..	..	..	129	21	..	..	129	21	150
" later..	..	..	..	..	8	3	..	..	8	3	11
7. Number of cases which ceased to attend after completion of treatment but before final tests of cure	24	6	2	..	55	5	..	..	79	11	90
8. Number of cases transferred to other centres or to institutions, or to care of private practitioners	150	61	..	..	69	60	..	..	221	121	342
9. Number of cases remaining under treatment or observation on 31st December	501	206	..	..	108	57	..	..	609	263	872
TOTALS OF ITEMS 5, 6, 7, 8 AND 9	772	344	5	..	540	171	261	79	1,578	594	2,172
10. Number of cases in the following stages of syphilis included in Item 6 which failed to complete one course of treatment :—											
Syphilis, primary..	11	3	..	..	..	..	..	..	11	3	14
" secondary	2	9	..	..	..	..	..	..	2	9	11
" latent in 1st year of infection	2	..	..	..	..	..	..	..	2	..	2
" all later stages ..	14	6	..	..	..	..	..	..	14	6	20
" congenital	1	11	..	..	..	..	..	..	1	11	12
11. Number of attendances :—											
(a) for individual attention of the medical officers	5,735	3,708	20	..	5,085	1,027	601	194	11,441	4,929	16,370
(b) for intermediate treatment, e.g., irrigation, dressing	107	894	..	..	32,024	4,593	..	..	32,131	5,487	37,618
TOTAL ATTENDANCES	5,842	4,602	20	..	37,109	5,620	601	194	43,572	10,416	53,988
12. In-patients :—											
(a) Total number of persons admitted for treatment during the year	8	12	..	..	26	24	..	..	34	36	70
(b) Aggregate number of "in-patient days" of treatment given	195	432	..	..	544	1,204	..	..	739	1,636	2,375

	Under 1 year		1 and under 5 years		5 and under 15 years		15 years and over		Totals.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
13. Number of cases of congenital syphilis in Item 3 above classified according to age periods	1	1	1	..	2	5	5	7	9	13

	Arsenobenzene Compounds	Mercury	Bismuth
14. Chief preparations used in treatment of Syphilis :—			
(a) Names of preparations ..	Stabilarsan, Sulphostab	..	Bismostab, Chlorostab, Quinostab
(b) Total number of Injections given (out-patients and in-patients)	5,906	..	5,696
(c) Number of injections *included in* (b) given to patients who on first attendance at this Centre were suffering from primary and secondary syphilis ..	1,778	..	2,106

Venereal Disease Clinic.

Pathological Examinations.

1933	Microscopical		Serum Tests		
	for spirochetes	for gonococci	Wassermann	Others for syphilis	for Gonorrhoea
Examinations of pathological material :— (*a*) Specimens which were examined at, and by the medical officer of, the treatment centre ..	49	—	—	—	—
(*b*) Specimens from persons attending at the treatment centres which were sent for examination to an approved laboratory	—	1,312	1,328	38	294

No. of attendances from each area.

Name of county or county borough ..	Bristol	Somerset	Gloucestershire	Wiltshire	Devon	Cornwall	Glamorganshire	Monmouthshire	Cardiganshire	London	Bath	Southampton	Birmingham	Glasgow	Leeds	Newport	Manchester	Preston	Stockport	Swansea	Leicestershire	Kent	Surrey	Hertfordshire	Dorset	Hampshire	Essex	Durham	Newcastle	Total
A. Number of cases from each area dealt with during the year *for the first time* and found to be suffering from :																														
Syphilis	212	7	9	..	..	1	1	..	..	2	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	1	236
Soft chancre	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
Gonorrhoea	368	33	16	7	..	..	..	..	..	17	2	1	2	..	2	..	2	..	2	..	1	1	1	1	1	..	..	1	..	458
Conditions other than venereal ..	296	23	12	..	1	..	1	..	1	3	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	340
Total	881	63	37	7	1	1	2	..	1	22	3	1	2	..	3	..	3	1	2	..	1	1	1	1	1	1	1	1	1	1,039
B. Total number of attendances of all patients residing in each area ..	52,222	885	675	37	1	3	12	3	1	41	30	1	2	4	5	31	5	1	2	7	3	..	1	1	4	1	3	4	2	53,988
C. Aggregate number of "in-patient days" of all patients residing in each area	1,188	588	453	85	..	..	..	..	..	9	..	..	..	..	..	..	27	..	..	25	..	..	..	..	..	..	..	..	..	2,375
D. Number of doses of arsenobenzol compounds given in the out-patient clinic and the in-patient department to patients residing in each area	5,517	189	165	..	..	..	7	..	..	3	1	..	..	..	..	18	..	1	..	4	..	..	..	..	..	..	..	1	..	5,906

PREVENTION OF BLINDNESS.

1932	Statistics at 31st March	1933
634	Blind persons on register	639
54	Registered during year	51
117	Resident pupils in school	120
87	Workers and adult pupils in workshops	89
58	Homeworkers	57
19	Women resident in hostel	18
370	Blind persons visited by home teachers (not included above)	370
138	Unemployable blind assisted by grants ...	145
296	Exemptions Certificates held under Wireless Telegraphy (Blind persons' facilities) Act, 1926	289
48	Granted during year	36

My report for 1930 described the administrative scheme made under the Local Government Act, 1929, for the welfare and training of blind persons, the arrangements made to co-ordinate the work of the various committees of the Council and for securing the efficiency of the services delegated to voluntary associations.

The administrative scheme was amended in March, 1932,—as briefly mentioned last year—to deal with all necessitous blind persons including unemployable and other destitute blind persons, instead of limiting the scheme to the assistance of the aged, infirm and unemployable blind. The revised scheme came into operation on the first day of April, 1932.

During the year, inspections were made of the services provided by the Bristol Royal Blind Asylum, including the workshops in Park Street and the hostel for blind women workers in Woodland Road. Visits were also paid to the homes of blind homeworkers, and to the home for unemployable and middle aged blind women in Gordon Road, established by the National Institute for the Blind.

The arrangements made by the Bristol Royal Blind Asylum for the registration, certification, employment, training and welfare of the blind continue to be adequate and efficient, but suggestions have been made with the object of improving the recording system of registration which it is hoped will shortly be adopted. Satisfactory certification has been secured by the adoption since February, 1931, of the entire scheme since recommended in Circular 1353 of the Ministry of Health dated 5th October, 1933, for the examination and certification of blind persons. Representations have been made to the Blind Persons Act Committee regarding the establishment of new trades at the workshops such as boot repairing and mattress making and the extension of employment of trained blind persons in factories in the city.

During the year under review the Royal Blind Asylum have expended the sum of £9,844 1s. 5d. upon the education and training of blind persons and have incurred expenditure, amounting to £13,909 8s. 9d. for the provision of benefits to adult blind persons, towards which expenditure the Council contributed the sum of

£7,729, this being the amount included in the scheme made under the Local Government Act, 1929. The Council have also expended a sum of £283 in respect of blind persons resident in the institutions of the Public Assistance Committee and have paid a further sum of £667 in respect of services rendered to blind persons in the city by various organisations and for medical inspection of blind persons.

The general manager of the Royal Blind Asylum Workshops, who keeps the blind register, has supplied an analysis (see page 107) of the registered blind in the city on the 10th February, 1934. He states that " It is probable that owing to the different definition of blindness for school admission purposes and general registration many of those under 16 years of age will not become registered adult blind. The particular feature of the work during the past two or three years has been the clinic examinations for registration. The Royal Blind Asylum has been able to cooperate in following up doubtful cases and cases requiring treatment with the hope that such treatment may result in the prevention of ultimate blindness, and in some cases we have found it necessary to assist in obtaining suitable glasses. Generally there seems to be an indication that fewer young people are coming on for training and employment, and we hope this is so, but there is an increasing number of applicants for help as unemployables. The social club meeting weekly. available to this class, has been well attended and seems to be much appreciated."

I append a report by Dr. R. R. Garden, certifying ophthalmic surgeon to the Council, on the work in 1933 at the Education Committee's eye clinic, to which applicants for registration are referred for ascertainment and certification in accordance with the Blind Persons Act, 1930.

BLIND PERSONS CLINIC.

Report by R. R. Garden, M.A., M.B., D.O.M.S., D.P.H., Certifying Ophthalmic Surgeon.

During 1933, a total of 42 sessions were held, including 31 clinics and 11 periods of home-visiting for the purpose of examining invalids.

The total number of persons examined was 182, which included 59 already on the register, 81 new applicants, and 42 re-examination cases. All the old cases were retained on the register as being blind according to the definition, and of the new candidates 63 were certified as blind persons, while 18 had too much sight to be accepted. Of the 81 new cases, 12 were pupils aged sixteen or over maintained by the Bristol Education Committee at schools for the blind, and all except two of them were admitted to the register.

The following is a summary of the causes of blindness, as far as could be ascertained, in the new cases registered during the year :

Congenital and undetermined causes—	
Congenital, hereditary and developmental ...	1
Myopic error	4
Glaucoma, primary	9
Cataract, primary	15
Other undetermined causes	4

Infectious and bacterial—	
Ophthalmia neonatorum	3
Syphilis, congenital	4
,, acquired	2
Local infection of coats of eye	2
Eczematous kerato-conjunctivitis	1
Chronic septicaemia : auto-toxic, focal sepsis	9
Traumatic and chemical—	
Non-industrial trauma	2
Sympathetic ophthalmia	1
General diseases—	
Vascular diseases	1
Diseases of central nervous system	2
Diabetes	2
Other general diseases	1
	63

As in previous years, consideration was given in every case examined to any possibility of improving the vision, and 16 were referred to institutions for treatment, or given prescriptions for glasses. Of this number, four were old cases already on the register, five were new applicants certified as blind, and seven new cases certified not blind. The remainder were already under treatment or had eye conditions which required no further attention.

With a few exceptions, all cases on the register at the end of 1930 had been examined by the end of 1933, but before a survey of the revision can be made a considerable amount of additional work will be required in a group of cases where the etiology of blindness is very doubtful. So far the revision has achieved its main objects, i.e., to ensure as far as possible that the benefits under the Act were being obtained only by those who were " too blind to perform any work for which eyesight is essential," and to give advice to every person examined in regard to any possibility of improving the vision or of alleviating any suffering which might exist.

A new development in preventive work was initiated during the year. In future, all children who leave the special school for the partially-sighted will be followed up and re-examined at suitable intervals. In this way, we hope to ensure that the treatment of myopia and other eye conditions will be continued after school life.

Welfare of the Blind.

Registration at Age Periods—As at 10/2/1934.

0—5			5—16			16—21			21—30			30—40			40—50			50—60			60—70			70—			Total		
M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
—	—	—	18	7	25	9	7	16	6	14	20	27	16	43	49	28	77	58	56	114	80	86	166	61	116	177	308	330	638

Ages at which Blindness occurred.

0—1			1—5			5—10			10—20			20—30			30—40			40—50			50—60			60—70			70—			Unknown
37	53	90	12	11	23	12	15	27	23	22	45	28	17	45	26	19	45	41	42	83	64	60	124	42	58	100	13	27	40	16

(a) Training and Employment. Age period 16 and upwards.

Employed.												Undergoing Training																							
By Blind Institutions.						All others not included in (a) & (b)			Total employed			Industrial			Secondary			Professional or University			Trained but unemployed			No Training but trainable			Unemployable			Total		
Workshops (a)			Home workers (b)			(c)			(d)			(e)			(f)			(g)			(h)			(i)			(j)			(k)		
M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
40	28	68	8	1	9	31	6	37	79	35	114	9	6	15	—	—	—	—	—	—	2	1	3	—	1	1	200	280	480	290	323	613

(b) Occupations of Employed.

—	Agents, Collectors, etc.	Basket Workers	Bedding (including divans, and ottomans and upholstering			Boot repairers	Brushes		Carpenters and woodworkers	Chair seaters	Ministers of religion	Clerks, typists	Telephone operators	Dealers (tea agents, shopkeepers, etc.)	Domestic servants	Farmers	Hawkers	Home teachers	Knitters		Labourers	Massage	Mat makers	Musicians and music teachers	Netting makers	Newsvendors	Porters, packers, and cleaners	Poultry farmers	School teachers	Straw bagmakers	Tuners	Weavers	Miscellaneous	Total
			Mattress makers	Machinists	Upholsterers		Pan	Wire drawn											Hand	Machine														
Within institutions for the blind ...	3	26	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	4	10	7	...	...	9	1	...	...	...	...	2	...	...	4	...	68
In approved home workers' schemes	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	6	...	1	9
Others (not pastime workers ...	4	...	...	...	...	1	...	...	...	...	...	1	...	1	1	...	2	...	1	...	...	2	6	3	...	2	...	...	1	...	5	...	7	37
Total ...	7	26	...	...	...	1	...	1	...	1	...	1	...	1	1	...	2	4	11	7	...	2	15	6	...	2	...	...	3	...	11	4	8	114

Physically and Mentally Defective (all ages).

(a) Mentally Defective			(b) Physically Defective			(c) Deaf			(d) Combination of (a) and (b)			(e) Combination of (a) and (c)			(f) Combination of (b) and (c)			(g) Combination of (a), (b), (c)			Total		
M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
13	26	39	16	14	30	12	24	36	...	2	2	2	2	4	2	1	3	...	...	...	45	69	114

Ham Green Hospital.

Table of admissions and discharges, 1933.

Admissions as notified 1932		Remaining in hospital end of 1932	Admission as notified	DISCHARGED						DISCHARGED		Total	Mortality rate per cent.	Remaining in at end of 1933
				Diagnosis confirmed		With super-added infections		Total	Mortality rate %	Diagnosis not confirmed.				
				Recovered	Died	Recovered	Died			Recovered	Died			
429	Scarlet fever ...	67	583	548	4	12	...	564	0.7	17	...	17	...	51
577	Diphtheria	71	712	626	22	14	...	662	3.3	61	...	61	...	64
13	Enteric fever ...	...	8	4	1	...	...	5	20	2	...	2	...	1
47	Whooping cough ...	...	29	11	11	1	...	23	47	3	...	3	...	2
21	Measles	2	157	166	3	2	...	171	1.6	3	...	3	...	7
59	Erysipelas	3	76	61	3	1	...	65	4.6	4	1	5	...	9
28	Broncho-pneumonia	3	12	7	8	3	1	19	47	...	...	...	...	1
	Influenzal pneumonia	1	45	22	16	...	...	38	40	2	...	2	...	...
	Lobar pneumonia ...	...	26	19	4	2	...	25	16	1	...	1	...	...
9	Mumps	2	7	8	...	...	...	8	...	1	...	1	...	2
16	Chicken pox ...	1	1	2	...	...	...	2	...	...	...	...	...	...
	Dysentery	...	1	2	...	...	...	2	...	...	...	...	...	...
2	German measles ...	...	1	1	...	...	...	1	...	...	...	...	...	...
4	Cerebro-spinal fever	...	1	2	...	...	...	2	...	...	...	...	...	...
	Malaria	...	1	2	...	...	...	2	...	...	...	...	...	...
	Puerperal fever ...	...	3	2	1	...	...	3	33	...	...	...	...	...
	Enceph. lethargica...	...	...	...	1	...	...	1		...	...	...	...	...
41	Mixed infections and observation cases ...	3	40	29	1	...	...	30	...	...	...	...	...	1
1,246	TOTALS	153	1,703	1,512	75	35	1	1,623		94	1	95	...	138

(The apparent numerical discrepancies in the horizontal columns are due to the alterations in the diagnosis of the original notifications).

IX.—REPORTS OF MEDICAL SUPERINTENDENTS OF CITY HOSPITALS, SANATORIA, ETC.

HAM GREEN HOSPITAL AND SANATORIUM.

Report by B. A. I. Peters, B.A., M.D., D.P.H.,
Resident Medical Superintendent.

Staff.

Resident medical superintendent	B. A. I. Peters, B.A., M.D., D.P.H
Assistant resident medical officers	B. J. Boulton, M.B., Ch B.
,, ,, ,, ,, ...	C. Short, M.B., Ch.B., D.P.H.
,, ,, ,, ,, ...	R. B. Mayfield, M.B., Ch.B., D.P.H.
Matron	Miss K. M. Baldwin.

Assistant matrons, 3 ; sister tutor, 1 ; night sisters, 2 ; ward sisters, 12 ; charge nurses, 2 ; staff nurses, 11 ; probationers, 59 ; dispenser, 1 ; clerks, 2 ; domestic staff, 77 ; male servants, including engineers, orderlies, &c., 17.

During the year 1933, the number of cases admitted to the isolation hospital increased by 457 compared with the total admissions in 1932. This increase is mainly due—as may be seen in the table of admissions and discharges—to the treatment of a larger number of cases of diphtheria, measles and pneumonia.

Scarlet fever.

A considerable increase in the number of admissions over last year is shown (583). Four deaths occurred : one from surgical scarlet fever arising from a septic wound and cellulitis of the arm and axilla, one from pyaemia in an infant of 15 months, one in a case of septic scarlet fever seven days ill before admission who only lived a few hours after admission, one in a child with a chronic tubercular kidney who developed an empyema. The death rate is, therefore, .7 per cent. The disease is a little more severe than it was some years ago. Seventeen cases were suffering from a previous endocarditis on admission and nine developed this complication after admission (1.6 per cent.). Nine return cases occurred (1.5 per cent. on discharges).

As a result of our special method of treatment which was commenced three years ago, renal complications are again at a very low rate. Eight patients had a slight albuminuria, seven for under a week and one for a fortnight and one case developed some nephritis. This was the first case for two years (on 915 cases) i.e., .01 per cent. compared with a rate of 1.9 per cent. for the previous 17 years. That means that our method of treatment has wiped out 94 per cent. of this serious complication. A total rate for all renal complications of 1.6 per cent. compared with our former rate of 11 per cent. That the present type of scarlet fever is capable of causing nephritis was shown by the fact the 11 late cases were admitted with this complication already present. All responded rapidly and favourably to this same line of treatment.

Diphtheria.

This disease showed increased prevalence (662 cases with 22 deaths) but the proportion of "dangerously ill" cases was less than last year (14.4 compared with 22.5). The death rate was 3.3 per cent. The death rate is rather swollen by four deaths in which diphtheria played a very subsidiary part. One fatal case occurred from septic broncho-pneumonia following in a child operated on for acute mastoiditis in another hospital who was subsequently found to be a diphtheria carrier ; another death occurred in a mentally deficient child with mild diphtheria from an epileptic fit ; another child, being treated for acute nephritis in another institution, developed severe diphtheria and died in a uraemic fit ; another child was admitted from another institution after a severe septic appendicitis and subsequent diphtheria. Of the remainder, four cases were moribund on admission and only survived a few hours.

Our special method of treatment has now been applied to 3,158 cases with 93 deaths (2.9 per cent). We feel justified in considering this a low rate considering that a number of very virulent cases are still arising in the city. Although the recovery rate is high amongst the bad cases, only one fatal case of paralysis occurred in the appendicitis case already noted.

In addition to these genuine cases of diphtheria 61 cases were discharged in which the diagnosis was considered to be in error, approximately 10 per cent.

Measles.

One hundred and seventy one (171) cases were under treatment during the year. As most of the cases occurred in the spring and summer the death rate was low, 1.6 per cent. Only severe cases from poor homes were admitted. When the epidemic occurs in severe winter weather the death rate on such hospital cases is usually 10-13 per cent.

Pneumonia.

During the height of the influenza epidemic 67 cases of severe broncho-penumonia were admitted, of these one third died. It was very noticable that in all the fatal cases the pneumonia was superimposed on former chronic illnesses, chiefly asthma and bronchitis. In one small ward of 16 beds, there were at one time four cases of this disease in patients with an extreme degree of chest deformity from scoliosis (a comparatively rare deformity) of which three died. Many of the fatal cases were admitted very late in the illness. It is of very doubtful benefit to a patient with any form of pneumonia to remove them to hospital under such circumstances as they stand moving very badly at a late stage of their illness.

Erysipelas.

Seventy six (76) cases came under treatment during the year of which three died (4.6 per cent.), about half the average death for this complaint which is 8 per cent.

With the assistance of Drs. Boulton and Short, a large amount of research work was done in this disease, the results of which were communicated to members of the West of England branch of the Society of Medical Officers of Health in January, 1934.

The investigation was on the same lines as the work already done on diphtheria and scarlet fever which appears to have been of material benefit in those diseases. It was based on an attempt to apply certain principles of colloidal chemistry to the treatment of streptococcal infection. We recorded striking results in many of the cases, the treatment causing the disease to stop within 24 hours and vanish in 48 hours in certain groups of cases. We think our results in other cases showed where an advance could be made in the treatment of the more malignant streptoccoccal infections if the help of a skilled bio-chemist could be obtained to elucidate some of the factors which are beyond the sphere of our capabilities and time. As the method of attack is entirely unorthodox, our paper cannot find a publisher in the medical press as yet, although it represents a very large amount of original work by the three of us, much of it in the small hours of the morning.

Cerebro spinal fever.

Two cases were under treatment during the year. One case was treated with serum without any benefit. On the administration of repeated doses of three milligrams of gold intrathecally in normal saline the patient gradually made a complete recovery. Another case responded immediately to one dose of two milligrams of *Crisalbine* intrathecally without any other treatment and recovered very rapidly. Another case was treated last year with serum without benefit and when apparently hopeless (the C.S. fluid having become yellow with spontaneous clot) rapidly recovered with intrathecal gold.

Although one cannot deduce much from only three cases, the fact that the three consecutive cases recovered by this method suggests that it may be of value.

Puerperal fever.

Three cases were admitted of which two recovered. One died. She had become extremely bloodless from continued bleeding for a week and sepsis before admission, and in spite of transfusion died.

Abortus fever.

One case who was admitted, gave an agglutination of 1 in 50. This proved to be a case of perinephritic abscess. Another case was admitted with an agglutination of 1 in 80 who was suffering from lateral sinus thrombosis. These cases suggest that a diagnosis of abortus fever based on agglutination tests alone may be entirely wrong.

Operations.

One hundred and eleven (111) operations were performed under general anaesthesia (including 51 removals of tonsils and adenoids, 19 acute mastoiditis, seven tracheotomies, five abdominal sections and three empyemas). Some of these cases were admitted from outside our area by arrangement with the outside authority.

Other diseases.

In accordance with modern practice a greatly increased number of other diseases besides scarlet fever and diphtheria are being nursed each year. The need for an increased number of small wards for such is greatly felt.

Cross infection.

Four patients contracted scarlet fever when in hospital and three patients contracted measles (.4 per cent. of those discharged). The following table shows the number of patients and staff admitted from the general hospitals of the city who contracted an infectious disease in the institutions.

Hospital	Patients		Staff				
	Diphtheria	Scarlet fever	Diphtheria	Scarlet fever	Erysipelas	Measles	Whooping cough
A	13	3	1	1	1	5 (1 Nurse)	—
B	39*	7	13	1	3	1	3
C	2	1	—	1	3	2	—
D	14	1	1	—	1	2	1
E	—	—	1	1	1	2	—
Ham Green	—	4	—	—	—	3	—

* Seven of these cases were nasal diphtheria.

It will be seen from this table that patients in this hospital run a smaller risk than those in general hospitals. (We should expect a 40 per cent. lower incidence as our patients are all already suffering from an infectious disease, on the other hand most of our patients are children whilst the proportion of susceptible children in the general hospitals is low). These tables are given to contradict the mistaken idea that patients in a fever hospital run a big risk of catching something else. Diseases never spread from ward to ward. A cross infection always arises within the unit from a carrier or from some one being admitted incubating a second disease. The very low incidence of this trouble in our hospital is due to the use of the methods introduced here in 1912 and published in "Public Health" in 1914.

They are simply : a vigilant attitude of all the staff to recognise the earliest signs of any second disease, plenty of space between each bed, separation of acute and convalescent cases as far as possible, a very free ventilation in the acute wards, rigid precautions to prevent the carriage of particulate matter on utensils or hands of attendants from patient to patient (aseptic nursing), the search for diphtheria carriers in non-diphtheria wards and lately by the testing and active immunisation of diphtheria cases against scarlet fever before allowing them to mix with other convalescents.

Staff sickness.

Sixty eight (68) new entrants were Schick and Dick tested and those giving a positive result were immunised. As a result of these methods no member of the staff has contracted diphtheria for over four years nor scarlet fever for over two years.

No infectious sickness (excluding influenzal colds) has attacked any member of the staff for over two years, a rather remarkable result seeing the great variety of diseases nursed. One member of the staff contracted tubercular pleurisy but is making a good recovery.

NOVERS HILL HOSPITAL.

Staff.

Visiting medical officer ... B. A. I. Peters, B.A., M.D., D.P.H.
Home sister ... ... Mrs. E. E. Lane
Nursing superintendent ... Miss E. R. Wilcox

Ward sister, 1 ; staff nurse, 1 ; probationers, 6 ; domestic staff, 11 ; male servants, including engineer, lodge-keeper, etc., 6.

The following cases were treated in Novers Hill during the year. Convalescents from Ham Green,—diphtheria, 259 ; scarlet fever, 110 ; measles, 13 ; direct admissions—chicken pox, 7 ; mumps, 41 ; observation cases, 15 ; total, 445.

HAM GREEN SANATORIUM.

Table of admissions and discharges, 1933.

Remaining in sanatorium at end of 1932	Admitted	Discharged	Died	Remaining in sanatorium at end of 1933
131	274	204	92*	109

* Three deaths were considered not to be due to tuberculosis.

The most notable event during 1933 was the demolition of the unsatisfactory temporary buildings and their replacement by excellent permanent wards and staff quarters which are nearing completion.

We have still to deplore the hopelessly advanced stage in which so many patients still come under institutional treatment for the first time. No less than 10 per cent of the total cases expired within a fortnight of admission. Even if the disease becomes arrested the patient's working capacity in these advanced cases is reduced to zero owing to the extensive damage the lungs have sustained. In about 75 per cent. of the cases the patients will not seek medical advice until in a hopeless state. On enquiry this appears to be due to fear of losing work if still able to carry on for some cases, in others the fear of being told the worst, in women the fear of being separated from their families and in some the lack of the realisation of their failing health.

Return showing the results of observation of doubtfully tuberculous cases discharged during the year.

Diagnosis on discharge from observation.	Pulmonary tuberculosis						Non-pulmonary tuberculosis						Totals		
	Stay under 4 weeks.			Stay over 4 weeks.			Stay under 4 weeks.			Stay over 4 weeks.					
	M.	F.	C.	M.	F.	C.	M.	F.	C.	M.	F.	C.	M.	F.	C.
Tuberculous	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Non-tuberculous	...	...	...	...	...	...	3	3	...	...	...	...	...	...	...
Doubtful	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...
Totals	...	...	...	...	...	...	5	4	...	...	...	...	...	...	...

Return showing the immediate results of treatment of definitely tuberculous patients discharged during the year.

Classification on admission to the Institution.		Condition at time of discharge.	Duration of residential treatment in the institution.															
			Under 3 months.			3–6 months.			6–12 months.			More than 12 months			Totals			Grand Totals
			M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
PULMONARY TUBERCULOSIS	Class T.B. minus.	Quiescent ..	3	9	..	14	14	..	8	2	..	2	3	..	27	28	..	55
		Not quiescent ..	6	8	..	4	..	..	3	..	..	..	1	..	13	9	..	22
		Died in institution	8	2	..	..	..	..	1	1	..	1	1	..	10	4	..	14
	Class T.B. plus Group i.	Quiescent ..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	1	2
		Not quiescent ..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
		Died in institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Class T.B. plus group ii.	Quiescent ..	..	..	..	2	1	..	1	..	..	..	..	..	3	1	..	4
		Not quiescent ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		Died in institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Class T.B. plus group iii.	Quiescent ..	3	..	..	4	4	..	7	5	..	2	3	..	16	12	..	28
		Not quiescent ..	9	12	..	13	8	..	8	12	..	12	6	..	42	39	..	80
		Died in institution	27	21	..	9	3	..	3	5	..	2	4	..	41	32	..	74
NON-PULMONARY TUBERCULOSIS	Bones and Joints	Quiescent ..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1
		Not quiescent ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		Died in institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Abdominal	Quiescent ..	1	..	..	..	3	..	..	..	..	..	..	..	..	4	..	4
		Not quiescent ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		Died in institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Other Organs	Quiescent ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		Not quiescent ..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
		Died in institution	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
	Peri-pheral glands	Quiescent ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		Not quiescent	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		Died in institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

Included in above table are 9 who died, and 9 who left, within 14 days of admission.

FRENCHAY PARK SANATORIUM AND ORTHOPAEDIC HOSPITAL.

Report by K. H. PRIDIE, M.B., B.S., F.R.C.S.,
Resident Medical Superintendent.

Staff.

Consulting orthopaedic surgeon	G. R. Girdlestone, Esq., F.R.C.S. (Eng.)
Consulting radiologist	T. B. Wansbrough, M.B., Ch.B.
Visiting physician	C. J. Campbell Faill, F.R.C.P., Ed.
Visiting surgeon	H. Chitty, M.S., F.R.C.S., Eng.
Resident medical superintendent	K. H. Pridie, M.B., B.S., F.R.C.S.
Matron	Miss L. Allen.

Ward sisters, 5; staff nurses, 3; probationers, 17; schoolmistresses, 3; domestic staff, 11; engineer, 1; porter, 1.

Analysis of discharges during 1933.

Type of case.	Quiescent	Non-quiescent	Died	Non-T.B.	Doubtful	Total
Pulmonary tuberculosis	25	10	2	—	—	37
Non-pulmonary tuberculosis	46	7	2	—	—	55
Observation	—	—	—	36	8	44
* Orthopaedic	—	—	—	17	—	17

* This group includes arthritis of spine (1), hip (9), sacro-iliac joint (1), shoulder (1), scoliosis (1), rickets (3), and infantile paralysis (1).

Operations during 1933.

Major operations under general anaesthetic	7
Minor operations under general anaesthetic	31*
Operations under gas anaesthesia	69
Operations under local anaesthesia	24

* This group includes 23 cases of removal of tonsils and adenoids.

Structural alterations.

There have been no additions to the hospital this year. The only changes have been slight structural alterations. The verandah to both wards has been enlarged so that all the cases can now be accommodated outside without crowding. The doors to the duty room of ward III have been enlarged, and a glass cover has been erected to shield the entrance to the duty room.

A large square space has been converted on the south aspect of the school, so that in fine weather cases may have their lessons in the open. Glass windows have been provided and this has added to the comfort of the children, as previously the floor of the school was often wet during the winter months.

Alterations have been planned for the kitchen to reduce the heat in summer, and give adequate ventilation, these alterations have not yet been carried out. The scullery has been tiled and a new floor made.

Administration.

The nursing staff has been increased by two probationers and a secretary appointed for clinical note keeping, who attends two half days a week.

Treatment.

Since the introduction of the plaster of paris hyper-extension bed, as outlined in the last annual report, there has been a great saving in splint expense.

In October, 1930, an article was published in the Journal of Bone and Joint Surgery (Flugel, Otto.) on Calf Milt (Spleen) Diet in the treatment of suppurative tuberculosis of the joints. This treatment was carried out in ten such cases, and no improvement was noted, in fact, the treatment seemed to make these cases worse.

SOUTHMEAD HOSPITAL.

Report by P. Phillips, M.D., M.Sc., Ch.B.,
Resident Medical Superintendent.

Staff.

Visiting physician	Professor J. A. Nixon, C.M.G., M.D., F.R.C.P., Lond.
,, surgeon	A. Wilfred Adams, M.B., M.S., F.R.C.S.
,, consultant children's diseases	O. C. M. Davis, M.D., D.Sc., M.R.C.P.
,, consultant, ear, nose and throat diseases	G. R. Scarff, F.R.C.S.
,, dental surgeon	G. F. Fawn, L.D.S., B.D.S.
,, gynaecologist and obstetrician	Professor R. S. S. Statham, MD., Ch.M.
Hospital dental surgeon	Hanbury Hazell, L.D.S.
Orthopaedic clinic—	
Surgeon (honorary)	Professor E. W. Hey Groves, M.D., D.Sc., M.S., F.R.C.S., Eng.
Surgeon	H. Chitty, M.S., F.R.C.S., Eng.
Assistant surgeon	K. H. Pridie, M.B., B.S., F.R.C.S., Eng.
Resident medical superintendent	P. Phillips, M.D , M.Sc., Ch.B.
Senior assistant medical officer	R. W. Savage, M.R.C.S., L.R.C.P.
Assistant resident medical officers	(2) (1 for obstetrics).
Steward	Mr. T. Jones
Matron	Miss M. E. Price

Assistant matrons, 2 ; sister tutor, 1 ; night sisters, 2 ; theatre sister, 1 ; district maternity sister, 1 ; maternity sister, 1 ; ward sisters, 15 ; staff nurses, 19 ; probationers, 78 ; chaplains, 3 ; organist, 1 ; assistant steward, 1 ; clerks, 2 ; clinical notetaker, 1 ; masseuses, 2 ; dispenser, 1 ; domestic staff, 60 ; male servants, including storekeeper, engineer, etc., 37.

During 1933 the chief developments in the hospital have been :

1. The adaptation of an existing building as additional quarters for resident medical officers.
2. The building of a new operating theatre.

The former scheme involved the loss of some beds for chronic cases, which have been accommodated elsewhere.

It is hoped that the new theatre will be available in the early part of 1934. This should give a surgical unit capable of dealing with future developments.

The classification of beds was as follows :—

Medical	144
Surgical	72
Children	42
Chronic sick	103
Tuberculosis	68
Isolation	30
Maternity	44
(Cots in maternity)	37
	540

The average number of beds occupied daily was 479.

(*a*) Highest (on 2nd March, 1933) ...	549
(*b*) Lowest (on 7th August, 1933) ...	422

During the year 2,860 cases were discharged, whilst deaths numbered 494. The more rapid use of the beds is shown clearly, when it is realised that the duration of stay of these patients was as follows :—

(*a*) Under four weeks	2,144
(*b*) Over four weeks but under thirteen	785
(*c*) Thirteen weeks or more	425

This greater "turnover" of cases is certainly aiding the efficiency of administration and treatment.

Massage department.

In-patients.	1932	1933	Increase	Decrease
Total massage treatments ...	6,298	7,114	816	...
Total electrical treatments...	513	550	37	...
Radiant heat treatments ...	318	757	439	...
Total exercises, S.R.E. ...	213	58	...	155
Total treatments	7,342	8,479	1,292	155

In this department another increase in the total treatments is recorded. As I pointed out last year, this branch of the work is in urgent need of development. It is futile to imagine that two masseuses can carry out all the work required in a hospital of this size. Much more could be done for hemiplegic cases if additional staff was available. Since suitable accommodation will soon be completed in the rooms beneath the new theatre, I consider the present time most opportune for this improvement.

X-rays and medical electricity.

Each year finds increasing demands being made for X-rays, various forms of light therapy, radiant heat and diathermy. For example, during 1933 approximately 300 more X-ray examinations were made than in the previous year. With the recent introduction of the city supply of alternating current for use in the new theatre and lift, an excellent opportunity presents itself for rearranging this work. A new room will be available and it is hoped that a more powerful, shock-proof X-ray apparatus will be installed in the near future.

At the same time a "light" room may be provided and all these "special services" housed centrally beneath the new theatre buildings. During the past year many cases from Hortham Colony have been dealt with, whilst valuable assistance has been afforded to the ante-natal clinics by the provision of X-rays in difficult cases.

The number of cases treated by diathermy shows an increase of 143 on the previous year.

Ham Green Hospital.

Table of admissions and discharges, 1933.

Admissions as notified 1932		Remaining in hospital end of 1932	Admission as notified	DISCHARGED						DISCHARGED		Total	Mortality rate per cent.	Remaining in at end of 1933
				Diagnosis confirmed		With super-added infections		Total	Mortality rate %	Diagnosis not confirmed.				
				Recovered	Died	Recovered	Died			Recovered	Died			
429	Scarlet fever ...	67	583	548	4	12	...	564	0.7	17	...	17	...	51
577	Diphtheria	71	712	626	22	14	...	662	3.3	61	...	61	...	64
13	Enteric fever ...	...	8	4	1	...	...	5	20	2	...	2	...	1
47	Whooping cough ...	...	29	11	11	1	...	23	47	3	...	3	...	2
21	Measles	2	157	166	3	2	...	171	1.6	3	...	3	...	7
59	Erysipelas	3	76	61	3	1	...	65	4.6	4	1	5	...	9
28	Broncho-pneumonia	3	12	7	8	3	1	19	47	...	...	...	...	1
	Influenzal pneumonia	1	45	22	16	...	...	38	40	2	...	2	...	...
	Lobar pneumonia ...	...	26	19	4	2	...	25	16	1	...	1	...	...
9	Mumps	2	7	8	...	...	...	8	...	1	...	1	...	2
16	Chicken pox ...	1	1	2	...	...	...	2	...	...	...	...	...	...
	Dysentery	...	1	2	...	...	...	2	...	...	...	...	...	...
2	German measles ...	...	1	1	...	...	...	1	...	...	...	...	...	...
4	Cerebro-spinal fever	...	1	2	...	...	...	2	...	...	...	...	...	...
	Malaria	...	1	2	...	...	...	2	...	...	...	...	...	...
	Puerperal fever ...	...	3	2	1	...	...	3	33	...	...	...	...	...
	Enceph. lethargica...	...	...	...	1	...	...	1		...	...	...	...	...
41	Mixed infections and observation cases ...	3	40	29	1	...	...	30	...	...	...	...	...	1
1,246	TOTALS	153	1,703	1,512	75	35	1	1,623		94	1	95	...	138

(The apparent numerical discrepancies in the horizontal columns are due to the alterations in the diagnosis of the original notifications).

Radium treatment.

Close co-operation has been maintained with the radium centre at the Bristol Royal Infirmary during the year. Relatively few cases arrive in this hospital suitable for radium treatment. All such cases have been transferred. Three cases of rodent ulcer showed excellent results.

Medical section.

Diseases of the circulatory system formed the largest group of causes of admission in this section. These were followed by digestive and respiratory affections. Nervous diseases furnished the cause of admission of 187 cases. Another large group (211), comprises tuberculosis and influenza.

An epidemic of influenza swept the hospital about the middle of January. The staff suffered severely, as many as twenty nurses being ill at one time, whilst those still on duty had to bear much additional work in the wards.

The accommodation for tuberculosis has been fully occupied throughout the year. More pulmonary cases have been transferred to Ham Green, and the beds utilised for cases of surgical tuberculosis.

Finally, there are about fifteen cases of post-encephalitis lethargica still receiving treatment. Many of these have been here since 1924. None show any improvement, and many show signs of gradual mental deterioration. I should like to see accommodation provided for these patients in some more suitable institutions.

Surgical section.

The number of operations performed during the year was 429, an increase of 51 compared with 1932. There were 55 abdominal sections and no deaths under anaesthetics. This is particularly gratifying since many of the newer anaesthetics such as avertin, eripan sodium, etc., have been used in suitable cases. Spinal anaesthesia has proved its value, especially in older patients suffering from genito-urinary complaints.

At present all demands for anaesthetics are met by the resident staff, but as the work increases, it may become necessary to consider the provision of some other scheme.

Cancer appears second highest in the causes of death, but with a large increase in the cases treated, the number that proved fatal was 118 compared with 106 in the previous year.

Blood transfusion is of such known value in many cases that it would be a very great asset for the city to prepare a panel of suitable donors, possibly in conjunction with the local ambulance authorities.

The new additional theatre should be ready by the end of April and the unit then available will provide—

1. A large anaesthetic room ;
2. Plaster room.
3. Surgeons' changing room and annexe.
4. Theatres for clean and septic cases.
5. An electric lift.

This will greatly facilitate all surgical work and meet the needs of many years to come.

Orthopaedic section.

In this department 160 patients were dealt with compared with 107 in 1932. The cases were accommodated in the surgical wards, whilst for surgical tuberculosis male cases were nursed in the chalet and female cases in ward L. Although this may not be ideal, the provision of more specialised accommodation does not appear warranted at the present juncture.

Gynaecological department.

Thirty six operations were performed during the year. Most of these were for incomplete abortion, and as in the previous year much evidence was accumulated which points to the fact that many of the cases were not due to natural causes. In one such case abortifacient pills were obtained which on analysis were found to contain massive doses of quinine.

Maternity department.

The maternity work of the hospital is still increasing and 621 women were confined in hospital as compared with 538 in 1932; this is an increase of 83.

At the ante-natal clinic attended by the hospital staff, 456 women recorded 1,520 attendances. The report of the district sister shows that ante-natal visits were paid to 86 patients. Of these, 59 were delivered in their own homes. There was one abortion and one stillbirth. The details of hospital cases were as follows :—

Total number of cases (3 twins)	621
Number of live births	589
,, still-births	35
,, cases of ophthalmia neonatorum ...	nil
Puerperal sepsis	nil
,, pyrexia	nil
Number of maternal deaths	2

Cause of death (1) Post-partum haemorrhage. This patient had severe influenza immediately before delivery.

(2) Eclampsia. Had not attended any ante-natal clinic or made any provision for confinement.

Eight children died within ten days of birth. All were premature.

The new accommodation provided for these cases during 1932 has worked very satisfactorily. It would have been impossible to deal with such a large number of patients without it.

Eleven nurses were trained for the C.M.B. examination at which all were successful.

Our staff still work under the difficulty of having to attend lectures in midwifery at the Bristol General Hospital. Much time is wasted in journeying to and fro whilst there is additional expense to the nurses themselves and to the Health Authority. Now that all reasonable facilities have been provided one sees no reason why our own lectures should not be recognised.

Ear, nose and throat section.

The amount of work in this department was about the same as in the previous year. Seventy-two operations were performed and of these, sixty one were removal of tonsils and adenoids.

Extremely good results have been obtained in many cases of very chronic ear discharge, by operative measures, for the clearance of the nose and throat.

The darkening of the new operating theatre will be much more complete than we can at present obtain. This should materially assist the work.

Dental work.

A dental session is held for hospital patients on Saturday mornings by the dentist employed in connection with the school clinics. The arrangement is working satisfactorily, the only difficulty arising in the provision of dentures. This is naturally expensive but in my opinion some assistance is imperative for necessitous cases ; otherwise they tend to refuse dental treatment which may be essential to their recovery.

Examinations and teaching.

Twenty nurses completed their training in 1933.

During the year the hospital has placed certain accommodation at the disposal of the General Nursing Council for the oral and practical portions of their examinations. The examinations of the University of Bristol in clinical medicine were also held here in June and December.

Clinical demonstrations have been given here weekly by Professor J. A. Nixon as in former years, whilst the course in medicine for dental students of the University was held here by Dr. O. C. M. Davis. Cinematograph films of subjects of medical and surgical interest have been exhibited for the instruction of nurses from time to time, and a few films have been made of cases of unusual interest.

STAPLETON INSTITUTION.

(Administered by the Public Assistance Committee).

Report by S. Datta, M.D., Ch.B.,
Resident Medical Officer.

1932	Admissions and discharges.	1933
761	Patients resident on 31st December, (males, 331, females, 502)	833
716	Admitted during year	627
724	Discharged during year	411
439	Certified under Lunacy Acts	533
145	Certified under Mental Deficiency Acts ...	145
177	Not certified	155

Admissions and discharges.

The greater number of patients resident in the institutions at the end of the year, compared with 1932, is entirely accounted for by the increase in the number of those certified under the Lunacy Acts. The patients discharged were dealt with as follows :—

235 to the Bristol Mental Hospital.
77 to other institutions.
99 relieved or recovered.

Training and employment of patients.

	Male.	Female.	Total.
Total employed ...	118	156	274
Not employable	213	346	559
Total in residence ...	331	502	833

Facilities exist for a limited number of males to be employed in boot repairing, tailoring and bakery. The remainder are occupied on the farm, garage, coal yard, boilers and ward work. The women are employed in ward work, sewing and laundry.

Treatment of patients.

In addition to medical and nursing care, the patients are given systematic dental treatment by Mr. H. Hazell, L.D.S., a member of the dental staff of the Health and Education Committees. Dentures are supplied by contract with two outside dentists.

Major surgical cases, as well as the more serious medical cases, are treated at Southmead Hospital, provided the patients are mentally amenable.

Alteration in accommodation.

New quarters for the nursing staff have been provided by converting the "old french prison" for this use. This has improved facilities for classification among patients, and given more day room and dormitory space by releasing rooms formerly occupied by nurses.

Institution dietary.

This has been completely modified along the lines suggested by a recent Ministry of Health memorandum. As a consequence the food is now considerably richer in first class protein vitamin and mineral content.

Infectious diseases.

The following cases occurred :—acute primary pneumonia, 1 ; enteric fever, 2 ; erysipelas, 2 ; tuberculosis, 5 ; It is highly gratifying to note that dysentery has not re-appeared this year. It is too early to attribute this freedom to the improvement in the dietary, and the increased quantity of protective vitamins consumed by the patients.

Deaths.

There were 144 deaths during the year, 121 of these were patients over sixty years of age. The causes of death were :—

Senility with hypostatic congestion of the lungs, etc.	89
Cerebral vascular diseases	19
Acute respiratory conditions	16
Tuberculosis of the lungs	4
Carcinoma	3
Miscellaneous	13

EASTVILLE INSTITUTION.

(Administered by the Public Assistance Committee).

Report by J. A. Lanson Roberts, M.B., Ch.,B., L.R.C.P., M.R.C.S., Medical Officer.

Table A.

1932	Admissions and discharges.	1933
250	Admissions to sick wards from—other parts of institution	346
549	—casual wards and outside	625
799	Total	971
329	Discharges from sick wards to—other parts of institution	434
—	—Ham Green Hospital	3
100	—Southmead Hospital	72
39	—Stapleton Institution	64
178	—Outside	189
13	—Removals	5
659	Total	767
129	Deaths	179

During 1933, 1,089 persons were admitted to the institution, one more than last year ; of these, 971 were admitted to the sick wards (including 625 direct), the total comprising 662 males and 402 females. Admissions to the male sick ward increased from 515 to 662 in 1933, and in the female sick ward from 284 to 309 in 1933, a total increase of 172 admissions. The sick wards contain 182 beds of which an average of 162 have been occupied. The causes of admission are given in table B.

During the year the nursery block was reconditioned and re-equipped and now provides a day-room for the patients in the female sick block and also accommodation for 22 extra beds. This accommodation allowed 49 chronic cases to be received from Southmead Hospital.

In February, 1933, the diets of inmates were examined by Dr. A. G. Morison, the deputy medical officer of health and myself in relation to calorific value, vitamin content and essential food percentages. Certain minor alterations were recommended and effected. The modified diet is giving satisfaction.

During 1933, Mr. and Mrs. J. C. Hole retired on pension and Mr. A. S. Wilks, assistant master, and Miss E. C. Cleal, assistant matron at Southmead Hospital, were appointed master and matron. We can look forward with confidence to a long period of progress and useful work at the Institution.

Table B.

1932	Cause of admission.	1933		
		Males	Females	Total
165	Senility	113	133	246
145	Chest conditions ...	95	31	126
81	Cardia-vascular ...	38	18	56
72	C.N.S.	30	50	80
125	Acute febrile	157	35	192
92	Septic and ulcerated legs	114	5	119
18	Malignant disease ...	6	3	9
—	Rheumatic conditions ...	21	5	26
101	Other diseases	88	29	117
799	Totals	662	309	971

From the able-bodied section of the institution 939 male and 205 female cases have been given treatment (other than treatment in the sick wards) and 242 males and 122 females have been admitted to the sick wards.

Two babies and two mothers were admitted during 1933, one child and one mother from outside and one child and one mother from Southmead Hospital. Three babies were discharged without mothers to the Children's Homes.

Deaths.

There were 179 deaths in the institution during the year, the average age at death being 77 years. The following table given an analysis of the causes of death :

Table C.

1932	Causes of death.	1933
69	Senility	65
5	Malignant disease	7
7	Acute illness	14
23	Disease of nervous system	27
18	Disease of respiratory system	43
3	Disease of circulatory system	18
2	Disease of genito-urinary system ...	3
2	Other diseases	2
129	Total	179

Casuals.

During 1933, 657 casuals were medically examined at the monthly examinations and in addition 540 casuals were seen by the medical officer for various complaints, an increase of 180 compared with the number treated in 1932. The number of casuals requiring admission to city institutions and hospitals has also increased from 146 to 204, an increase of 58, and were dealt with by transfer to :

Eastville, 180 ; Stapleton, 9 ; Southmead Hospital, 15,

for the reasons stated in the following table :—

Table D.

1932	Admission from casual wards to city hospitals and institutions.	1933
9	Aged and infirm	7
35	Skin conditions	51
13	Septic feet	27
11	Abscesses and septic conditions	12
8	Ulcerated legs and varicose veins	7
6	Venereal disease	8
2	Cardiac disease	2
9	Chest conditions	18
5	Rheumatism	2
14	Influenza	20
1	Malignant disease	4
2	Mental disease...	7
31	Other diseases	39
146	Total	204

DENTAL TREATMENT.

Report by Hanbury Hazell, L.D.S., R.C.S. (Eng.),
Joint institution and schools dental surgeon.

Summary for 1933.

Institution.	Extractions.		Anaesthetics.		Scaling	Dress-ing	Other Opera-tion	Fillings.	
	Temp.	Perm.	Local	General				Temp.	Perm.
Southmead ...	27	587	46	119	6	2	59	1	11
Ham Green ...	27	210	115	11	17	5	59	—	6
Frenchay ...	186	23	9	74	2	2	178	—	18
Children's Homes...	147	19	55	29	51	1	259	2	81
Eastville ...	—	68	20	11	2	—	9	—	—
Stapleton ...	—	457	—	26	141	—	378	—	—
Hortham ...	22	326	109	60	5	—	22	—	—
Maternity and child welfare:									
Expectant mothers Nursing mothers		2368	315	1214	—	33	196	95	29
Infants ...	2779								
Total ...	3188	4058	669	1544	224	43	1160	98	145

In addition, 182 patients were supplied with dentures (40 partial, 142 complete) at Southmead Hospital (10), Ham Green (6), tuberculosis dispensaries (3) and maternity and child welfare clinics (163).

In the middle of the year treatment was commenced for the first time at Hortham Colony and for patients from Eastville Institution. At Hortham it was found that dental treatment was urgently required by a large percentage of patients and so it was thought advisable to attend primarily to the necessary demands of the many rather than to the detail conservative treatment of the comparative few. In this manner it is believed that all patients can be rendered reasonably free from actual pain while future conservative treatment is carried out.

A regular visit to Eastville Institution was not considered justifiable on account of the few patients requiring treatment. Apart from those who are bed-ridden or otherwise unable to leave the institution the patients requiring treatment are conveyed to Southmead Hospital for dental relief. Those who cannot make the journey are attended to at Eastville. Few patients here are likely to benefit by dental treatment except those requiring relief from pain of dental origin.

Patients at Southmead Hospital referred for dental treatment, for the most part required complete extractions due either to extensive caries of the teeth or to very chronic and progressive periodontitis or both. In those cases requiring complete clearance of teeth and considered suitable treatment is completed under aether general anaesthesia in the theatre after a course of prophylactic treatment.

A similar dental condition obtains in patients at Ham Green Sanatorium but treatment differs somewhat. Little is done at one sitting and usually under local anaesthesia. Occasionally patients in the Isolation Hospital require extraction of teeth.

On the whole the dental condition of patients at Stapleton is slightly improved and particularly is this so of the gums. The periodontal disease has progressed too far in most cases to be cured but some sort of a check can be kept on its advance. The majority of new patients seen here during the year came, I believe, from Fishponds Institution, so a large percentage of treatment for these was anticipated. Dirty mouths, that is, with food debris and tartar, are common and may be attributed to several causes. In the first place large numbers of patients are unable to use the tongue, lips, facial and masticatory muscles correctly. It cannot be stressed too emphatically what an important part these play during the whole life in the formation of good dental arches, efficient trituration of food, mouth cleanliness and aesthetic appearance. One only has to observe a post-encephalitic patient to realise what follows the inefficient use of these muscles. Another factor in the cause of the food collection around the teeth is the neglect of the use of the tooth brush and of mouth washing. At most of these institutions, dentures are provided to selected patients, unable to obtain provision themselves, through the committees, and are supplied from outside sources. At present there is no uniformity of this supply of dentures.

The children at the homes apparently continue to shew interest in the cleanliness of their teeth for of those who were seen and treated last year much less treatment was needed, but the new arrivals, almost as a whole, required dental attention. Of children over the age of three, 95 had left while there were 35 new cases.

There were many new admissions to Frenchay Park Sanatorium during the year and much treatment for these was needed. Few of the children who had had a prolonged stay and who were benefiting under general treatment, presented any serious dental defect.

APPENDIX.

Compiled from figures supplied by Registrar General.

VITAL STATISTICS.

Extracts for Calendar Year, 1933.

1932		1933
	LIVE BIRTHS.	
2,983	Legitimate males	2,759
2,865	,, females	2,639
5,848	Total	5,398
111	Illegitimate males	98
106	,, females	96
217	Total	194
6,065	Total	5,592
15.01	Birth rate	13.66
	STILLBIRTHS.	
139	Legitimate males	125
90	,, females...	120
229	Total	245
5	Illegitimate males	6
5	,, females...	9
10	Total	15
239	Total	260
37.90	Rate per 1,000 total births... ...	44.43
	DEATHS.	
4,692	Total	4,929
11.62	Death rate	12.04
6	Maternal deaths from sepsis ...	11
12	Other causes	14
	Infantile mortality rate per 1,000 live births :	
51.8	Legitimate	52.9
78.3	Illegitimate	103.1
52.7	Total	54.9
2	Deaths from measles (all ages)	16
31	,, ,, whooping cough (all ages) ...	15
43	,, ,, diarrhoea (under 2 years of age)	29

Supplied by the Registrar General.

Birth-rates, Death-rates, and Analysis of Mortality in the year, 1933.

(Provisional Figures)

	RATE PER 1,000 TOTAL POPULATION		ANNUAL DEATH-RATE PER 1,000 POPULATION.									RATE PER 1,000 LIVE BIRTHS.		PERCENTAGE OF TOTAL DEATHS.			
	Live Births	Still-Births	All Causes	Typhoid and Paratyphoid fevers	Small-pox	Measles	Scarlet fever	Whooping cough	Diphtheria	Influenza	Violence	Diarrhoea and enteritis (under two years)	Total deaths under one year	Certified by registered medical practitioners	Inquest cases.	Certified by coroner after P.M. No inquest	Uncertified causes of death
England and Wales	14.4	0.62	12.3	0.01	0.00	0.05	0.02	0.05	0.06	0.57	0.54	7.1	64	90.9	6.3	1.9	0.9
118 County boroughs and great towns, including London	14.4	0.67	12.2	0.00	0.00	0.06	0.02	0.06	0.08	0.55	0.49	9.4	67	91.0	6.0	2.5	0.5
126 Smaller towns (Estimated Resident Populations 25,000 to 50,000 at Census 1931).	14.5	0.63	11.0	0.00	0.00	0.04	0.02	0.04	0.04	0.53	0.44	4.9	56	91.7	5.8	1.5	1.0
London	13.2	0.45	12.2	0.00	0.00	0.02	0.02	0.08	0.08	0.51	0.58	11.6	59	88.3	6.3	5.4	0.0
Bristol	13.6	0.64	12.0	0.00	0.00	0.04	0.01	0.04	0.05	0.69	0.52	5.2	55	92.5	7.0	0.5	0.0

The maternal mortality rates are as follows:

	Puerperal Sepsis.	Others.	Total.	
per 1,000 Live Births ..	1.79	2.63	4.42	ENGLAND AND WALES.
	1.97	2.5	4.47	BRISTOL.
per 1,000 Total Births ..	1.71	2.52	4.23	ENGLAND AND WALES.
	1.88	2.39	4.27	BRISTOL.

Compiled from figures supplied by Registrar General.

CITY AND COUNTY OF BRISTOL.

Population, Births, Deaths, Natural Increase, Infant Mortality, Maternal Mortality, for Calendar Year 1933 and previous years.

	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924
Estimated population (mid year)										
For birth rate ..	409,400	403,900	399,900	391,335	391,300	390,700	386,000	383,600	386,000	386,400
For death rate ..			399,600	391,035	391,000	390,400	385,700	383,300	385,700	386,200
Births.										
Legitimate—males	2,759	2,983	2,985	3,076	3,026	3,154	3,146	3,344	3,377	3,441
females ..	2,639	2,865	2,858	2,862	2,871	2,980	2,908	3,135	3,165	3,287
Illegitimate—males.. ..	98	111	104	122	97	115	128	104	96	103
females ..	96	106	93	97	101	114	119	93	92	109
Total	5,592	6,065	6,040	6,157	6,095	6,363	6,301	6,676	6,730	6,940
Rate per 1,000 living ..	13.66	15.01	15.1	15.7	15.6	16.3	16.3	17.4	17.4	18.0
Deaths.										
Males	2,412	2,352	2,310	2,210	2,466	2,202	2,327	2,226	2,554	2,322
Females	2,517	2,340	2,427	2,260	2,606	2,300	2,468	2,193	2,628	2,379
Total	4,929	4,692	4,737	4,470	5,072	4,502	4,795	4,419	5,182	4,701
Rate per 1,000 population	12.04	11.6	11.8	11.4	12.9	11.5	12.4	11.5	13.4	12.2
Deaths under 1 year.										
Legitimate ..	286	303	282	331	340	354	340	439	470	467
Rate per 1,000 births ..	53	52	48	56	58	58	56	68	72	69
Illegitimate	20	17	21	23	24	21	23	30	41	26
Rate per 1,000 births ..	103	78	107	105	121	92	93	152	218	123
Total deaths	306	320	303	354	364	375	363	469	511	493
Rate per 1,000 births ..	55	53	50	57	60	59	58	70	76	71
Natural increase per 1,000 population	1.62	3.52	3.3	4.3	2.6	4.8	3.9	5.9	4.0	5.8
Diarrhoea and Enteritis— (under two years)										
Deaths	29	43	16	26	27	30	29	38	59	40
Rate per 1,000 births ..	5.2	7.1	2.65	4.22	4.43	4.71	4.60	5.69	8.77	5.76
Childbirth (Mothers).										
Deaths	25	18	19	14	15	11	11	10	13	19
Rate per 1,000 births ..	4 .47	2.96	3.15	2.27	2.46	1.73	1.75	1.50	1.93	2.74
Puerperal Fever.										
Deaths	11	6	10	8	12	3	8	13	23	8
Rate per 1,000 births ..	1.96	0.99	1.66	1.30	1.97	0.47	1.27	1.95	3.42	1.15
Marriages.										
Number	3,183	3,098	3,287	3,320	3,197	3,059	3,071	2,845	3,012	2,924
Rate per 1,000 population	15.55	15.3	16.4	16.9	16.3	15.7	15.9	14.8	15.6	15.1

Figures from Registrar General's Returns.

Births.

YEAR	BRISTOL		ENGLAND and WALES.
	Number of Births.	Birth Rate.	
1881–1885	34,574	33.0	33.5
1886–1890	33,279	30.6	31.4
1891–1895	33,091	29.4	30.5
1896–1900	40,420	26.5	29.3
1901–1905	46,280	27.2	28.2
1906–1910	43,805	23.5	26.3
1911–1915	38,666	21.6	23.6
1916–1920	35,732	19.0	20.1
1921–1925	36,795	19.1	19.9
1926–1930	31,592	16.3	16.7
1918	6,015	15.9	17.7
1919	6,700	17.8	18.5
1920	9,602	25.4	25.5
1921	8,283	21.7	22 4
1922	7,495	19.5	20.4
1923	7,347	19.1	19.7
1924	6,940	18.0	18.8
1925	6,730	17.4	18.3
1926	6,676	17.4	17.8
1927	6,301	16.3	16.6
1928	6,363	16.3	16.7
1929	6,095	15.6	16.3
1930	6,157	15.5	16.3
1931	6,040	15.1	15.8
1932	6,065	15.0	15.3
1933	5,592	13.6	14.4

Deaths.

YEAR	BRISTOL		ENGLAND and WALES.
	Number of deaths.	Death rate.	
1881–1885	20,168	19.2	19.4
1886–1890	21,164	19.5	18.9
1891–1895	21,199	18.8	18.7
1896–1900	24,630	16.1	17.7
1901–1905	26,609	15.6	16.0
1906–1910	24,818	13.3	14.7
1911–1915	25,367	14.1	14.3
1916–1920	24,747	14.1	14.4
1921–1925	23,411	12.2	12.2
1926–1930	23,258	11.9	12.1
1918	5,795	17.1	17.3
1919	4,830	13.4	14.0
1920	4,430	11.7	12.4
1921	4,230	11.1	12.1
1922	4,927	12.8	12.8
1923	4,371	11.3	11.6
1924	4,701	12.2	12.2
1925	5,182	13.4	12.2
1926	4,419	11.5	11.6
1927	4,795	12.4	12.3
1928	4,502	11.5	11.7
1929	5,072	12.9	13.4
1930	4,470	11.4	11.4
1931	4,737	11.8	12.3
1932	4,692	11.6	12.0
1933	4,929	12.0	12.3

Figures from Registrar General's Returns.

Infant Mortality.

Year	Bristol. Number of deaths under one year	Bristol. Rate per 1,000 births	England and Wales
1881–1885	4,858	140	139
1886–1890	4,789	144	145
1891–1895	4,767	144	151
1896–1900	6,000	148	156
1901–1905	5,863	127	138
1906–1910	4,804	110	117
1911–1915	4,293	111	110
1916–1920	3,076	86	90
1921–1925	2,549	69	76
1926–1930	1,925	61	68
1918	551	92	97
1919	558	83	89
1920	665	69	80
1921	548	66	83
1922	541	72	77
1923	456	62	69
1924	493	71	75
1925	511	76	75
1926	469	70	70
1927	363	58	70
1928	375	59	65
1929	364	60	74
1930	354	57	60
1931	303	50	66
1932	320	53	65
1933	306	55	64

Maternal Mortality.

Year	Puerperal Sepsis			Other Puerperal Causes.			All Causes.		
	Bristol		England and Wales.	Bristol		England and Wales.	Bristol		England and Wales
	Number of deaths	Rate per 1,000 births		Number of deaths	Rate per 1,000 births		Number of deaths	Rate per 1,000 birtbs	
1891-1895	67	2.02	2.60	102	3.08	2.89	169	5.11	5.49
1896-1900	69	1.71	2.12	89	2.20	2.57	158	3.91	4.69
1901-1905	70	1.51	1.95	155	3.35	2.32	225	4.86	4.27
1906–1910	63	1.44	1.56	90	2.05	2.18	153	3.49	3 74
1911-1915	56	1.45	1.42	97	2.51	2.61	153	3.96	4.03
1916-1920	51	1.43	1.51	79	2.21	2.61	130	3.64	4.12
1921-1925	49	1.33	1.40	83	2.26	2.50	132	3.59	3.90
1926–1930	44	1.39	1.73	61	1.93	2.54	105	3.32	4.27
1918	10	1.66	1.28	19	3.16	2.51	29	4.82	3.79
1919	5	0.74	1.67	12	1.79	2.70	17	2.53	4.37
1920	21	2.18	1.81	17	1.77	2.52	38	3.95	4.33
1921	5	0.60	1.38	19	2.29	2.53	24	2.89	3.91
1922	7	0.93	1.38	14	1.87	2.43	21	2.80	3.81
1923	6	0.82	1.30	18	2.45	2.51	24	3.27	3.81
1924	8	1.15	1.39	19	2.74	2.51	27	3.89	3.90
1925	23	3.42	1.56	13	1.93	2.52	36	5.35	4.08
1926	13	1.95	1.60	10	1.50	2.52	23	3.45	4.12
1927	8	1.27	1.57	11	1.75	2.54	19	3.02	4.11
1928	3	0.47	1.79	11	1.73	2.63	14	2.20	4.42
1929	12	1.97	1.80	15	2.46	2.53	27	4 43	4.33
1930	8	1.30	1.92	14	2.27	2.48	22	3.57	4.40
1931	10	1.66	1.66	9	1.48	2.45	19	3.15	4.11
1932	6	0.99	1.61	12	1.97	2.63	18	2.96	4.24
1933	11	1.96	1.79	14	2.51	2.63	25	4.47	4.42

Compiled from figures supplied by Registrar General.

1933.

Principal Causes of Death during calendar year.

Death Rate per 1,000	DISEASE.	Net deaths in 1933	% to total deaths
.007	Typhoid and paratyphoid fevers ...	3	.06
.04	Measles	16	.33
.01	Scarlet fever	5	.10
.04	Whooping cough	15	.30
.05	Diphtheria	22	.45
.69	Influenza	284	5.76
.03	Encephalitis lethargica	13	.26
.02	Cerebro-spinal fever	6	.12
.84	Tuberculosis of respiratory system	343	6.96
.14	Other tuberculous diseases ...	59	1.20
.04	Syphilis	15	.30
.06	General paralysis of the insane, tabes dorsalis	23	.47
1.45	Cancer, malignant disease	595	12.07
.14	Diabetes	58	1.18
.62	Cerebral haemorrhage, etc.... ...	254	5.15
2.90	Heart disease	1,189	24.12
.05	Aneurysm	22	.45
.51	Other circulatory diseases ...	209	4.24
.45	Bronchitis	186	3.78
.68	Pneumonia (all forms)	277	5.62
.22	Other respiratory diseases	90	1.83
.06	Peptic ulcer	24	.49
.09	Diarrhoea, etc.	35	.71
.07	Appendicitis	27	.55
.03	Cirrhosis of liver	11	.22
.06	Other diseases of liver, etc. ...	24	.49
.27	Other digestive diseases	109	2.21
.38	Acute and chronic nephritis ...	154	3.12
.03	Puerperal sepsis	11	.22
.03	Other puerperal causes	14	.28
.43	Congenital debility, premature birth, malformations, etc. ...	177	3.59
.22	Senility	89	1.81
.14	Suicide	59	1.20
.38	Other violence	157	3.18
.86	Other defined diseases	352	7.14
.005	Causes ill-defined or unknown ...	2	.04
12.04		4,929	100.00

Supplied by the Registrar General

Causes of Death at Different Periods of Life in the County Borough of Bristol during the calendar year 1933.

CAUSES OF DEATH.	Sex.	All Ages.	0—	1—	2—	5—	15—	25—	35—	45—	55—	65—	75—
ALL CAUSES	M. F.	2,412 2,517	170 136	31 23	41 33	53 46	83 96	106 129	130 142	291 223	423 331	565 518	519 840
1 Typhoid and paratyphoid fevers	M. F.	1 2	... ...	... ...	... ...	1 ...	... 1	... ...	... ...	... 1	... ...	... ...	... ...
2 Measles	M. F.	10 6	... 1	4 2	3 2	3 1	... ...	... ...	... ...	... ...	... ...	... ...	... ...
3 Scarlet fever	M. F.	4 1	... ...	1 ...	... ...	3 1	... ...	... ...	... ...	... ...	... ...	... ...	... ...
4 Whooping cough	M. F.	9 6	5 5	2 1	2	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
5 Diphtheria	M. F.	7 15	... ...	... 1	2 4	4 10	... ...	... ...	1 ...	... ...	... ...	... ...	... ...
6 Influenza	M. F.	129 155	1 1	3 2	2 ...	1 5	1 6	6 10	13 11	26 17	19 22	22 22	35 59
7 Encephalitis lethargica ...	M. F.	8 5	... ...	... ...	... ...	... ...	2 ...	... 1	1 2	3 1	1 1	1 ...	... ...
8 Cerebro-spinal fever	M. F.	4 2	2 2	1 ...	... ...	1 ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
9 Tuberculosis of respiratory system	M. F.	191 152	... ...	1 ...	... ...	5 1	32 45	41 44	36 28	43 18	23 8	10 5	... 3
10 Other tuberculous diseases ...	M. F.	33 26	5 1	1 1	8 1	5 6	4 7	4 3	1 3	4 ...	1 ...	... 3	... 1
11 Syphilis	M. F.	10 5	2 1	... ...	... ...	... ...	... ...	2 ...	... 3	1 ...	2 1	3 ...	... ...
12 General paralysis of the insane, tabes dorsalis	M. F.	17 6	... ...	... ...	... ...	... ...	2 1	1 1	4 1	2 2	6 1	2 ...	... ...
13 Cancer, malignant disease ...	M. F.	278 317	... ...	... ...	2 ...	... ...	... 3	4 4	12 20	40 55	77 83	99 78	44 74
14 Diabetes	M. F.	24 34	... ...	... ...	... ...	... 1	... 2	2 ...	1 ...	1 4	7 6	9 16	4 5
15 Cerebral haemorrhage, &c. ...	M. F.	98 156	... ...	... ...	... ...	... ...	... ...	1 ...	1 2	10 11	14 28	38 48	34 67
16 Heart disease	M. F.	553 636	... ...	... ...	... ...	2 2	5 8	8 9	11 24	45 43	120 70	187 182	175 298
17 Aneurysm	M. F.	14 8	... ...	... ...	... ...	... ...	... ...	... 1	3 ...	1 2	5 3	2 2	3 ...
18 Other circulatory diseases ...	M. F.	103 106	... ...	... ...	... ...	... ...	... ...	... ...	1 ...	6 4	15 12	32 33	49 57
19 Bronchitis	M. F.	81 105	1 ...	... ...	... ...	... 1	... ...	2 ...	2 1	12 1	12 5	13 21	39 76
20 Pneumonia (all forms) ...	M. F.	143 134	32 25	7 7	6 10	3 4	2 1	4 8	7 4	23 15	25 17	19 17	15 26
21 Other respiratory diseases ...	M. F.	44 46	1 ...	1 1	... 1	2 ...	... 3	... 1	1 1	8 1	5 4	10 8	16 26
22 Peptic ulcer	M. F.	19 5	... ...	... ...	... ...	... ...	... ...	3 ...	... 2	4 2	5 1	4 ...	3 ...
23 Diarrhoea, &c.	M. F.	19 16	12 12	3 2	... ...	... ...	... ...	... ...	... ...	2 ...	1 2	... ...	1 ...
24 Appendicitis	M. F.	15 12	... ...	... ...	1 ...	1 3	4 1	3 ...	... ...	2 1	1 4	2 3	1 ...
25 Cirrhosis of liver	M. F.	7 4	... ...	... ...	... ...	... ...	... ...	... ...	... 1	1 ...	1 1	4 2	1 ...
26 Other diseases of liver, etc ...	M. F.	5 19	... ...	... ...	... ...	... ...	... ...	... 2	... ...	... 2	1 2	4 6	... 7
27 Other digestive diseases ...	M. F.	52 57	4 ...	2 ...	6 ...	1 5	2 1	2 4	... 4	7 7	11 10	9 12	8 14
28 Acute and chronic nephritis ...	M. F.	86 68	... ...	... ...	... ...	3 ...	3 1	2 2	8 3	12 5	18 17	27 18	13 22
29 Puerperal sepsis	F.	11	...	...	...	...	2	6	2	1	...	...	...
30 Other puerperal causes ...	F.	14	...	...	...	...	5	6	3	...	...	...	...
31 Congenital debility, premature birth, malformations, etc. ...	M. F.	100 77	98 75	1 1	... ...	... 1	1 ...	... ...	... ...	... ...	... ...	... ...	... ...
32 Senility...	M. F.	36 53	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	4 2	32 51
33 Suicide	M. F.	43 16	... ...	... ...	... ...	... ...	2 ...	6 5	4 4	12 2	13 3	4 1	2 1
34 Other violence	M. F.	95 62	1 3	1 4	3 6	11 ...	16 3	7 6	9 3	7 4	13 4	16 2	11 27
35 Other defined diseases... ...	M. F.	173 179	6 10	3 1	6 9	7 5	7 6	8 16	14 20	19 24	27 26	44 36	32 26
36 Causes ill-defined or unknown	M. F.	1 1	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... 1	1 ...

1932	NET INFANT DEATHS, 1933.				
Total	Under 1	Males	Females	Total	Rate
303	Legitimate	162	124	286	52.9 per 1,000 legitimate births.
17	Illegitimate	8	12	20	103.1 per 1,000 illegitimate births.
320	TOTAL ...	170	136	306	54.7 per 1,000 births.

CITY AND COUNTY OF BRISTOL (INCLUDING PORT CASES).

Showing the number of Cases of Infectious Disease notified under the Infectious Disease Notification Act, 1889, since its adoption in 1890, and cases of Tuberculosis notified under the Tuberculosis Regulations.

	1890	1891	1892	1893	1894	1895	1896	1897	ENLARGED CITY. 1898	1899	1900	1901	1902	1903	1904	1905
Small-pox ...	1	18		166	201	4	42	10	2			1	5	46	34	13
Plague ...																
Diphtheria (including M. Croup)	56	70	106	141	128	165	258	205	217	215	506	908	1,109	1,134	1,051	1,021
Erysipelas ...	105	135	196	230	154	195	246	203	263	337	342	392	376	244	256	303
Scarlet Fever ...	559	888	1,442	1,245	485	562	1,352	511	382	697	1,957	2,206	2,724	2,168	1,258	1,085
Typhus ...	1															1
Enteric Fever...	122	117	135	122	90	89	110	350	113	219	285	281	319	134	172	76
Relapsing Fever																
Continued or Doubtful Fever	6	8	3	6	1	1	2			2	2	2	1			
Puerperal Fever	11	11	34	30	18	16	21	10	18	36	46	43	39	31	27	30
Pulmonary Tuberculosis																330
Cerebro-Spinal Meningitis																
Anterior Polio-Myelitis ...																
Tuberculous Meningitis ...																
Tuberculosis of Peritoneum and Intestines ...																
Tuberculosis ,, Spinal Column																
Tuberculosis ,, Joints																
Tuberculosis ,, other Organs																
Ophthalmia Neonatorum...																
Measles ...																
Acute Primary Pneumonia ...																
Acute Influenzal Pneumonia ...																
Malaria																
Dysentery																
Trench Fever (revoked as from 1st Jan., 1928) ...																
Acute Encephalitis Lethargica ...																
Acute Polio Encephalitis ...																
Puerperal Pyrexia																
Chicken Pox ...																

	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915*	1916*	1917*	1918*	1919*	1920*
Small-pox ...	32	6	1	41	4		62			32	1				
Plague ...											4				
Diphtheria (including M. Croup)	839	926	924	712	556	584	643	762	633	505	407	376	420	448	965
Erysipelas ...	239	244	223	199	177	309	253	227	311	265	189	141	140	185	235
Scarlet Fever ...	1,019	886	486	692	1,216	953	580	1,738	2,211	1,069	629	257	278	363	1,411
Typhus ...															
Enteric Fever...	120	74	103	66	85	148	79	64	98	45	19	52	69	33	48
Relapsing Fever															
Continued or Doubtful Fever								3	1				2		1
Puerperal Fever	37	36	22	36	39	26	26	23	23	30	22	16	19	24	34
Pulmonary Tuberculosis	703	542	516	527	493	781	1,093	924	810	818	1,126	1,578	1,860	1,167	1,062
Cerebro-Spinal Meningitis		1				1	6	16	32	54	25	29	15	9	8
Anterior Polio-Myelitis ...						11	7	7	2	13	4	3	1	17	1
Tuberculous Meningitis ...								48	47	52	46	40	38	35	37
Tuberculosis of Peritoneum and Intestines ...								62	89	50	47	76	65	67	39
Tuberculosis ,, Spinal Column								40	16	8	10	8	17	8	15
Tuberculosis ,, Joints								71	40	23	23	27	15	19	18
Tuberculosis ,, other Organs								157	130	78	249	213	128	92	56
Ophthalmia Neonatorum...									70	96	89	65	72	99	125
Measles ...											3,635	734	7,962	650	(Notification discontinued)
Acute Primary Pneumonia ...														159	204
Acute Influenzal Pneumonia ...														388	72
Malaria														130	174
Dysentery														13	11
Trench Fever (revoked as from 1st Jan., 1928) ...														1	
Acute Encephalitis Lethargica ...														19	36
Acute Polio Encephalitis ...															1
Puerperal Pyrexia															
Chicken Pox ...															

	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
Small-pox ...	7			1			18	51	2				
Plague ...												1	
Diphtheria (including M. Croup)	1,426	886	737	979	1,128	711	653	599	1132	1484	828	543	640
Erysipelas ...	194	147	141	180	250	133	118	119	175	174	146	136	166
Scarlet Fever ...	1,576	1,852	1,444	831	1,494	951	1433	1211	1108	811	453	638	770
Typhus ...			1				1						
Enteric Fever...	35	31	32	42	23	16	27	44	30	22	29	17	11
Relapsing Fever	1												
Continued or Doubtful Fever												1	
Puerperal Fever	32	22	25	43	64	29	22	26	18	18	23	14	4
Pulmonary Tuberculosis	911	824	847	799	710	709	737	674	569	568	569	453	498
Cerebro-Spinal Meningitis	4	8	4	3	2	1	5	5	7	7	19	16	10
Anterior Polio-Myelitis ...	25	15	11	9	5	10	4	3	18	1	2	7	3
Tuberculous Meningitis ...	19	41	39	31	20	24	15	22	21	12	15	13	12
Tuberculosis of Peritoneum and Intestines ...	59	59	48	50	38	35	43	37	36	22	21	24	24
Tuberculosis ,, Spinal Column	11	26	15	14	13	13	8	14	13	12	15	13	11
Tuberculosis ,, Joints	21	36	51	39	26	41	34	23	17	12	21	19	25
Tuberculosis ,, other Organs	78	83	69	69	55	71	63	60	64	26	50	79	67
Ophthalmia Neonatorum...	95	119	82	89	56	45	38	37	25	19	22	40	35
Measles ...									1				
Acute Primary Pneumonia ...	187	262	270	249	426	309	339	395	387	272	289	291	321
Acute Influenzal Pneumonia ...	53	266	82	285	175	112	284	76	255	37	121	126	193
Malaria	30	38	9	19	4	5	4	16	4	4	2	10	3
Dysentery	9	9	15	32	5	104	23	2	5	26	44	128	8
Trench Fever (revoked as from 1st Jan., 1928) ...													
Acute Encephalitis Lethargica ...	64	8	24	162	62	40	18	19	11	7	9	7	9
Acute Polio Encephalitis ...		1		2			5	1			2		
Puerperal Pyrexia						19	75	51	68	71	39	44	46
Chicken Pox ...								1815					

DATES ON WHICH NOTIFICATION COMMENCED :—

Pulmonary Tuberculosis—Voluntary Notification	5th Sept., 1905.
Cerebro Spinal Fever—Local Order (6 months)	25th Mar., 1907.
Tuberculosis (Pulmonary, Poor Law) Regulations, 1908	1st Jan., 1909.
,, ,, Hospitals ,, 1911	1st May, 1911.
Cerebro Spinal Fever and Anterior Polio-Myelitis—Local Order (6 months)...	9th Oct., 1911.
Tuberculosis (Pulmonary, General) Regulations, 1911...	1st Jan., 1912.
Cerebro Spinal Fever and Anterior Polio-Myelitis—Local Order (permanent)	4th April, 1912.
,, ,, ,, ,, ,, General Order, 1912 ...	1st Sept., 1912.
Tuberculosis (all forms) Regulations, 1912	1st Feb., 1913.
Ophthalmia Neonatorum Regulations, 1914	1st April, 1914.
Measles and German Measles Order, 1915	1st Jan., 1916.
Encephalitis Lethargica and Polio-Encephalitis Regulations, 1918 ...	1st Jan., 1919.
Pneumonia, Malaria, Dysentery, etc., Regulations, 1919	1st Mar., 1919.
Puerperal Pyrexia Regulations, 1926	1st Oct., 1926.
Malaria, Dysentery and Pneumonia Regulations, 1927 (revoking Regulations of 1919)	1st Jan., 1928
Chicken Pox—Local Order (9 months)	21st Mar., 1928.

* Military cases excluded.

Results of Meteorological Observations during 1933.

		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
PRESSURE.	Mean pressure — inches	30.130	29.967	29.900	30.104	29.955	29.865	30.031	30.056	30.042	29.906	29.943	30.164	30.005 inches
	Greatest pressure — inches	30.738 (23rd)	30.612 (12th)	30.419 (8th)	30.512 (14th)	30.205 (18th)	30.275 (10th)	30.515 (4th)	30.408 (2nd)	30.313 (7th)	30.350 (3rd)	30.284 (8th)	30.707 (23rd)	30.738 (Jan. 23)
	Least pressure — inches	29.443 (17th)	29.332 (27th)	29.005 (17th)	29.686 (29th)	29.492 (7th)	29.331 (19th)	29.597 (14th)	29.706 (15th)	29.475 (23rd)	29.201 (28th)	29.244 (16th)	28.971 (28th)	28.971 (Dec. 28)
RAINFALL	Total rainfall at Bishopston — inches	2.93	4.17	3.16	1.28	2.13	1.58	1.92	0.92	2.86	2.65	0.59	1.10	25.29
	Departure from average — inches	+0.02	+1.70	+0.73	—1.04	—0.07	—0.98	—0.91	—2.76	0.00	—1.33	—2.74	—2.42	—9.80
	Heaviest fall in 24 hours — inches ...	0.70 (1st)	1.66 (24th)	0.61 (16th)	0.51 (28th)	0.67 (27th)	0.36 (23rd)	0.42 (13th)	—	0.92 (12th)	0.90 (10th)	0.26 (14th)	0.64 (1st)	1.66 (Feb. 24)
	Number of rainy days	17	20	15	8	16	12	11	10	13	17	7	8	154
	Total rainfall at Frampton Cotterell —inches	2.56	3.32	2.88	1.29	2.53	1.77	1.81	1.33	3.78	2.37	0.97	0.86	25.47
	Departure from average— inches	—0.26	+1.10	+0.72	—0.59	+0.47	—0.37	—1.13	—1.84	+1.37	—0.93	—1.79	—2.87	—6.12
	Heaviest fall in 24 hours — inches ...	0.64 (1st)	1.13 (24th)	0.60 (16th)	0.47 (28th)	0.74 (27th)	0.45 (25th)	0.43 (13th)	0.43 (20th)	1.10 (26th)	0.76 (10th)	0.35 (19th)	0.49 (1st	1.13 (Feb. 24)
	Number of rainy days	19	21	16	8	14	12	12	10	13	19	12	9	165
	Departure from average—inches	+1.2	+6.5	+ .02	—6.7	—0.2	—0.3	—2.4	—6.1	+0.6	+2.3	—3.7	—10.3	—19
TEMPERATURE	Mean temperature —degrees ...	36.0	39.25	46.1	48.15	55.2	61.4	64.9	64.4	59.9	50.6	42.2	33.8	50.2
	Departure from average —degrees ...	—3.8	—0.8	+3.8	+1.65	+1.74	+3.78	+3.5	+4.7	+4.0	+0.6	—0.5	—7.1	+1.0
	Maximum shade temperature —degrees ...	53.9 (2nd)	53.6 (5th)	67.1 (28th)	67.8 (7th)	73.8 (23rd)	86.8 (6th)	87.8 (4th)	85.8 (6th)	81.5 (4th)	67.1 (6th)	56.8 (1st)	44.0 (31st)	87.8 (July 4)
	Minimum temperature —degrees ...	17.8 (23rd)	19.6 (20th)	26.8 (28th)	28.2 (19th)	36.6 (15th)	44.7 (12th)	43.1 (1st)	41.6 (31st)	36.0 (15th)	29.9 (28th)	24.0 (13th)	16.8 (7th)	16.8 (Dec. 7)
	Extreme range —degrees ...	36.1	34.0	40.3	39.6	37.2	42.1	44.7	44.2	45.5	37.2	32.8	27.2	71.0
SUNSHINE. HUMIDITY. &c.	Hours of sunshine (estimated)	86½	89½	173	164½	163	218	244	240	163	104	81½	57½	1784½
	Departure from average	+13½	+10½	+60	+18½	—23	+26	+60	+69	+12	—7	+0½	—3½	+236½
	Days of sunshine	11	8	16	14	10	17	20	21	17	10	11	6	161
	Days overcast	6	8	5	3	2	2	2	3	4	9	9	13	66
	Mean humidity	85.8%	86.1%	81%	82.9	77.1%	73.2%	77.2%	77.1%	86.3%	92.4%	91.6%	87.9%	83.2%
	Days with fog	8	1	2	1	1	3	2	1	1	3	6	10	39
	Days with thunder	0	0	2	0	3	7	1	3	1	0	0	0	17
	Days lightning only	0	0	0	0	0	1	0	0	0	0	0	0	1
	No. of frosty nights	18	14	7	9	0	0	0	0	0	3	8	19	78
	No. of frosty nights on grass	20	18	14	12	0	0	0	0	0	5	12	24	105

ANALYTICAL DATA (Chemical and Bacteriological) OF CITY WATER SUPPLY, 1933.

Number of sample	2		11		16		19		31		54		67	
Date of collection	10 January.		20 February.		11 May.		14 June.		23 August.		17 November		27 December	
Place of collection	Tap in laboratory		Tap in laboratory		Tap in laboratory		Tap in laboratory		Tap in laboratory		Tap in laboratory		Tap in laboratory	
Physical appearance ... ... Remarks on solids	Clear, bright, neutral to litmus. No smell on heating solids.		Clear, bright, neutral to litmus. No smell on heating solids.		Clear, bright, neutral to litmus. No smell on heating solids.		Clear, bright, neutral to litmus. No smell on heating solids.		Clear, bright, neutral to litmus. No smell on heating solids.		Clear, bright, neutral to litmus. No smell on heating solids,		Clear, bright, neutral to litmus. No smell on heating solids.	
	Parts per 100,000.	Grains per gallon.	Parts per 100,000.	Grains per gallon.	Parts per 100,000.	Grains per gallon.	Parts per 100,000.	Grains per gallon.	Parts per 100,000.	Grains per gallon.	Parts per 100,000.	Grains per gallon.	Parts per 100,000	Grains per gallon
Oxygen absorbed	.030	.021	.019	.013	.020	.014	.018	.013	.024	.017	.063	.043	.013	.009
Free ammonia...	Traces		.001	.0007	nil		nil		nil		.001	.0007	.001	.0007
Albuminoid ammonia	.0035	.0025	.0025	.0017	.0035	.0025	.004	.0028	.004	.0028	006	.0042	.002	.0014
Nitrogen in nitrates	.06	.04	.13	.09	.07	.05	.12	.08	.048	.034	.04	.028	.08	.056
Chlorine as chlorides	1.3	.9	1.4	1.0	1.4	1.0	1.36	.95	1.5	1.1	1.43	1.0	1.5	1.1
Total hardness	16.2°		18.4°		16.3°		14.1°		12.0°		10.0°		15.4°	
Permanent hardness	4.7°		4.7°		4.7°		3.5°		4.0°		4.7°		4.3°	
Temporary hardness	11.5°		13.7°		11.6°		10.6°		8.0°		5.3°		11.1°	
Total solids	31.0	21.7	32.5	22.7	28.0	19.6	29.5	20.7	25.6	17.9	27.6	19.3	34.9	24.4
Mineral matter	24.5	17.2	28.5	19.9	23.0	16.1	24.9	17.5	19.8	13.8	23.0	16.1	24.3	17.0
Loss on ignition	6.5	4.5	4.0	2.8	5.0	3.5	4.6	3.2	5.8	4.1	4.6	3.2	10.6	7.4
Nitrites	nil		nil		Trace		Trace		nil		Trace		nil	
Colonies per cc on gelatine at 22°C		3		4	30			21 +9 liquefiers	liquefied		41		27 +4 liquefiers	
Colonies on agar at 37°C ...		4		5		4		4	nil			1		3
MacConkey's bile salt broth (B. coli test) 25 cc water used	Gas :	—		—		—		—		—		—		—
	Acidity :	—		—		—		—		+		—		+

Supplied by the City Treasurer.

COSTING RETURNS, 1933-34.

Statement showing the average cost per patient per week of the treatment of patients.

Items.	Southmead Hospital.		Ham Green Hospital.		Novers Hill Hospital		Ham Green Sanatorium		Frenchay Park Sanat'm		Children's Homes	
	Gross total cost	Average cost per patient per week*	Gross total cost	Average cost per patient per week*	Gross total cost	Average cost per patient per week*	Gross total cost	Average cost per patient per week*	Gross total cost	Average cost per patient per week*	Gross total cost	Average cost per patient per week*
	£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.
Salaries, wages, uniforms & dresses of staff, etc.:												
(*a*) Medical staff	2,416	1 10	1,130	3 4	114	2 2	753	2 4	746	3 1	5	...
(*b*) Matron and nursing staff	5,644	4 4	2,801	8 3	526	10 1	1,867	5 9	1,123	4 8	713	1 2
(*c*) Other staff	9,073	6 11	3,070	9 0	1,118	1 1 5	2,046	6 3	1,372	5 9	3,491	5 9
(*d*) Council's contributions to superannuation fund	1,579	1 3	547	1 7	97	1 10	365	1 2	176	9	480	10
(*e*) Employers' contributions in respect of National Health and Pensions and Unemployment Insurance	357	3	162	6	41	9	109	4	54	3	112	2
Provisions for patients and staff	11,905	9 1	2,736	8 0	558	10 8	6,383	19 7	2,077	8 8	3,518	5 10
Drugs and medical and surgical appliances ...	3,028	2 4	980	2 10	37	9	654	2 0	233	1 0	66	1
Clothing of inmates	955	9	...	...	3	1	...	...	140	7	1,182	2 0
Superannuation allowances under the Poor Law Acts	...	...	...	...	...	...	...	...	...	...	574	1 0
Fuel, light, water and laundry, wages of laundry staff and cost of laundry materials	5,436	4 2	2,581	7 7	407	7 10	1,721	5 3	1,182	4 11	2,297	3 10
Domestic renewals, repairs and additions ...	1,761	1 4	900	2 8	116	2 3	600	1 10	260	1 1	376	8
Structural additions, alterations, renewals, repairs and painting	6,623	5 1	2,873	8 5	154	2 11	1,915	5 11	1,111	4 7	2,608	4 4
Ambulance and other transport	480	4	1,138	3 4	157	3 0	759	2 4	301	1 3	363	7
Expenditure on farm and garden	...	...	869	2 7	...	...	579	1 9	173	9	14	...
Miscellaneous expenditure	697	6	364	1 1	114	2 2	242	9	318	1 4	400	8
Rent, rates (excluding water rates, taxes and insurance), etc.	1,068	10	699	2 0	131	2 6	466	1 5	416	1 9	583	1 0
Loan charges	3,969	3 0	3,879	11 4	173	3 4	2,941	9 1	3,479	14 4	345	7
Grand Totals ...	54,991	2 2 0	24,729	3 12 6	3,746	3 11 9	21,400	3 5 9	13,161	2 14 9	17,127	1 8 6
Deduct.—Income other than income in respect of the treatment of patients, viz. :—												
(*a*) Income from farm and garden ...	...	...	1,049	3 10			700	2 8	392	2 0	...	...
(*b*) Other income, including sale of garden produce where no separate farm and garden accounts	831	8	249		168	3 3	166		96		5	...
Net Totals	£54,160	£2 1 4	£23,431	£3 8 8	£3,578	£3 8 6	£20,534	£3 3 1	£12,673	£2 12 9	£17,122	£1 8 6
	Whole institution.		Whole institution.		Whole institution.		Whole institution.		Whole institution		Whole institution	
Average number of beds, excluding cots in maternity wards	503		236		60		140		96		307	
Average number of beds excluding cots in maternity wards occupied												
By medical cases	357		130.8		20.02		124.9		92		230	
By surgical cases	70		...		...		...		...		...	
By maternity cases	40		...		...		...		...		...	
Number of patient days during the year ...	183,380		47,766		7,309		45,595		33,633		84,088	
Number of days in the year during which the institution was open	365		365		365		365		365		365	
Number of patients discharged or died during the year	3,514		1,734		474		...		...		...	
Classification of cases—												
Observation and pulmonary ...	...		...		...		95%		59.4		...	
Non-pulmonary	...		...		...		5%		40.6 †		...	
Number of operations excluding dental operations performed under a general anaesthetic	437		97		...		...		...		...	
Average percentage of bed cases during year ...	79%		72%		33.3%		69%		70%		...	

* Parts of a penny not shown.

† Non. T.B. (Orthopaedic).—3.6

1933

BRISTOL
PORT SANITARY AUTHORITY

ANNUAL REPORT

OF THE

PORT MEDICAL OFFICER OF HEALTH

R. H. PARRY, M.D. Lond., M.R.C.P. Lond., D.P.H.

BRISTOL PORT SANITARY COMMITTEE.

Chairman

Alderman J. E. Jones, J.P.

Alderman H. J. Maggs, J.P.
Councillor C. G. T. Bennett
Councillor E. T. Cozens, J.P.
Councillor H. S. Evans
Councillor J. Owen
Councillor Sir Lionel Goodenough Taylor
Councillor H. A. White
Councillor V. J. Robinson

PORT SANITARY STAFF.

**Port Medical Officer of Health*

R. H. Parry, M.D. Lond., M.R.C.P. Lond., D.P.H.

**Deputy Port Medical Officer*

A. G. Morison, M.A., M.D., Ch.B., D.P.H.

**Assistant Port Medical Officers*

C. P. Hay, M.B., Ch.B., M.R.C.P. Ed., D.P.H.
G. C. Kelly, B.Sc., M.D., Ch.B., D.P.H.
A. R. Forbes, M.B., Ch.B., D.P.H.

**Chief Inspector*, J. A. Robinson, 1.2.

Inspectors

E. H. Scorrer, 1.2.
R. R. Tucker, 1.2.
C. W. Gould, 1.2.3.

Assistant Port Officers

T. E. Howick, 4.
C. A. Sampson.

Rat Catchers

*C. H. Ryman
*F. Peacock
*C. Scorrer
E. R. Poole

1. Certificated Sanitary Inspector.
2. Certificated Meat and Food Inspector.
3. Master Mariners' Certificate.
4. Liverpool University Cert. San. Science.

* Also engaged in the City.

INSPECTION OF ALIENS

Supervising Medical Inspector, Dr. R. H. Parry.

Medical Inspectors

Dr. A. G. Morison
Dr. C. P. Hay
Dr. G. C. Kelly
Dr. A. R. Forbes.

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BRISTOL PORT SANITARY AUTHORITY.

ANNUAL REPORT, 1933.

My Lord Mayor, Ladies and Gentlemen,

I have the honour to present to you a report upon the work of the Port Sanitary Authority during the year 1933.

During another year the officers of the department have carried out their duties successfully. In spite of the close contact which the port has with countries where acute infectious diseases such as cholera, plague, or smallpox are frequent, no cases of an acute infectious nature appeared in the city or district during the year. This is no mere matter of 'good fortune' but it has necessitated continuous vigilance on the part of the responsible officers night and day. Ships from 'infected' or suspicious ports have been carefully inspected on arrival at the port and kept under observation whilst in port. As mentioned in previous reports, the results may not be very outstanding on paper as they are mostly negative, but the preventive work done at this port is of the first importance not only to the port and city but also to the whole country.

Matters of particular interest to this service that occurred during the year were the following :—

1. On 1st May, 1933, the Port Sanitary Regulations, 1933, came into operation. The regulations are based upon agreements reached in the International Sanitary Convention of Paris, 1926, and make compulsory in British ports certain routine in regard to the inspection and supervision of ships arriving at the ports. Hardly any alteration was necessary in our routine in the port of Bristol for the general scheme had been in operation here for some years.

   In the *London Gazette* of 31st October, 1933, the Minister of Health declared the application to Bristol as from the 1st February, 1934, of the provisions of article 6 of the regulations, thus approving of Bristol as a designated port for wireless messages. This means that a ship fitted with transmitting apparatus and approaching Bristol must send a wireless message, if there are any circumstances on board requiring the attention of the medical officer. In this way, the procedure of dealing with ships having infection on board is much facilitated. On page 11 a full account is given of the working of these regulations in our ports.

2. Through the courtesy of the port health officer at Rotterdam, information was received of a case of typhus fever having been left at Rotterdam, from the Greek steamer "Alexandra," bound for Avonmouth. This exchange of information is of particular interest as it is one of the first of the direct port-to-port notifications arranged for by circular 1171 of the Ministry of Health. Arrangements were made for the disinfestation of the crew and the ship. Further particulars will be found on page 20.

During the year under review, 972 ships arrived at Bristol ports from "foreign" countries and 5,915 from coastwise, making a total from "foreign" and coastwise of 6,887. Of these ships, 27 were from ports known to have been infected by plague. Your medical officers visited 272 ships altogether and in nearly all these examined the crews. This compares with 250 ships visited during 1932. The port sanitary inspectors boarded 2,127 ships.

The number of cases of sickness landed from vessels arriving at the port was 114, in addition 59 cases of infectious and other sickness were reported to have occurred on vessels during the voyage, but had been disposed of prior to arrival.

There was no case or suspected case of yellow fever, smallpox or typhus on board these vessels. Fifteen cases were removed from ships to the isolation hospital for observation or treatment.

The medical inspectors of aliens inspected 178 aliens and subjected 11 of these to detailed examination. Three certificates of physical incapacitation were issued during the year.

The detection of rodent plague is one of the most important duties of the port sanitary authority. All ships from infected or suspicious ports were examined thoroughly for rat indications and wherever possible samples of rats were obtained for pathological examination for plague. In all 285 rats from these ships were examined during the year. For the purpose of sampling the rat population in the vicinity of the quays, 321 rats were examined pathologically giving a total of 606 examined during the year.

The number of certificates issued under article 27 of the International Sanitary Convention of 1926 was as follows :

Deratisation	26
Deratisation exemption ...	113
Total ...	139

Finally, the best thanks of the department are due to the assistance given to us by H.M. Customs officers and the officers of the port of Bristol docks authority. I desire also to bring to your notice the excellent service given to the port sanitary authority during the year by all the officers under the supervision of my deputy, Dr. A. G. Morison.

I am, my Lord Mayor, Ladies and Gentlemen,

Your obedient servant,

R. H. PARRY,
Port Medical Officer of Health.

REPORT ON THE WORK OF THE PORT SANITARY AUTHORITY

BY

A. G. MORISON, M.A., M.D., D.P.H.,
Deputy Medical Officer of Health.

The Port of Bristol comprises the Avonmouth docks, the City docks, and the Portishead docks, which have a total water area of 188 acres, and a dock quayage of 37,220 feet. The Corporation of Bristol are the owners of the entire dock system, the administration of which is vested in a committee, the Port of Bristol Authority.

During 1933 the following vessels entered the docks :—

	Number	*Tonnage*
Foreign ...	972	2,332,405
Coastwise ...	5,915	824,701
Total ...	6,887	3,157,106

I.—Amount of Shipping entering the Port during the year 1933.

(AVONMOUTH, PORTISHEAD AND BRISTOL DOCKS)

Table A.

		Number *	Tonnage *	Number inspected		Number reported to be defective	Number of vessels on which defects were remedied	Number of ves reported as hav or having ha during the voy infectious dise on board
				By the medical officer of health	By the sanitary inspector			
Foreign	Steamers	971	2,330,534	235	876	208	208	26
	†Motor ...			36	95	5	5	5
	Sailing ...	1	1,871	1	1	—	—	—
	Fishing	—	—	—	—	—	—	—
Total Foreign ...		972	2,332,405	272	972	213	213	31
Coastwise	Steamers	4,475	675,950	—	856	16	16	—
	†Motor ...			—	213	—	—	—
	Sailing ...	1,440	148,751	–	87	1	1	—
	Fishing	—	—	—	—	—	—	—
Total Coastwise ...		5,915	824,701	—	1,156	17	17	—
Total foreign and coastwise ...		6,887	3,157,106	272	2,127	230	230	31**

† Includes mechanically propelled vessels other than steamers.

* Figures supplied by Port Authority. The foreign tonnage includes vessels entering from a coastwise port to load for a foreign port.

** Excluding vessels having venereal disease on board.

II.—Character of Trade of Port.

Table B.

(*a*) *Passenger Traffic during* 1933.

No. of passengers		1st Class	2nd Class	3rd Class	Trans-migrants	Total
Inwards	Aliens	133	—	79	—	212
	British	1,897	—	—	—	1,897
Outwards	Aliens	128	—	—	—	128
	British	2,117	—	—	--	2,117

The foreign ports from which passengers principally arrived were :—
Kingston (Jamaica), Trinidad, Barbados, Port Limon, Puerto, Santa Marta, Cristobal, and West African ports.

(*b*) *Cargo Traffic.*

PRINCIPAL IMPORTS

Commodities			Tons
Grain		—	938,122
Oilseeds		—	61,930
Oilcake		—	18,539
Flour and meal		—	106,583
Fruit :			
Bananas	Bunches	4,513,931	68,647
Oranges and lemons	Cases	399,743	19,599
Other green fruit		—	8,667
Canned		—	3,277
Dried		—	4,712
Metals and ores :			
Brass		—	375
Copper		—	8,958
Iron		—	11,947
Lead		—	4,801
Spelter		—	375
Pyrites		—	8,749
Zinc concentrates		—	68,665
Paper		—	35,961
Petroleum		—	558.454
Provisions :			
Bacon		—	452
Butter		—	9,006
Cheese		—	8,685
Lard		—	7,676
Frozen meat		—	9,798
Sugar :			
Refined		—	3,470
Unrefined		—	4,684
Glucose		—	649
Molasses		—	7,022
Tobacco		—	26,367
Wine	Pipes	5,466	3,280
,,	Dozens	2,963	74
Spirits	Puncheons	161	97
,,	Dozens	39,967	800
Wood and timber		—	117,301
Wood pulp		—	47,830
All other goods		—	143,155
Total Foreign Imports		...	2,318,707

The storage capacity under the control of the port authority is over 250,000 tons, with a cold storage capacity of 500,000 cubic feet.

The chief imports are seen to be grain, flour and meal, fruit, provisions, meat, sugar, tobacco, metals, ores, oil-seeds, paper, wood pulp, petroleum, wood and timber. Ten per cent. of the grain imported into this country comes through Bristol. Nearly 600,000 tons of oil are imported annually. Twenty per cent. of the tobacco imported into the United Kingdom enters by Bristol, and about five million bunches of bananas enter the port annually.

PRINCIPAL EXPORTS

Commodities	Tons
Chemicals :	
Saltcake	2,660
Other kinds	850
Clay	3,266
Coke	16,036
Earths	998
Metals :	
Iron	2,542
Tinplates	1,250
Paper	1,070
Strontia	2,046
All other goods	12,663
Total Foreign Exports	43,381

(*c*) *Foreign ports from which vessels arrive.*

AFRICA.—	Accra, Apapa, Alexandria, Arzew, Bathurst, Beira, Bona, Capetown, Casa Blanca, Dakar, Durban, Lagos, Las Palmas, Mauritius, Mombasa, Oran, Port Natal, Port Sudan, Santa Cruz, Sfax.
AMERICA.—	
Canada - -	Campbellton, Halifax, Montreal, New Westminster, Quebec, St. John, Sorel, Three Rivers, Vancouver.
Newfoundland -	Botwood, St. John's.
United States -	Baltimore, Baton Rouge, Baytown, Beaumont, Bellingham, Boston, Brunswick, Charleston, Everett, Galveston, Houston, Jacksonville, Los Angeles, New Orleans, Newport News, New York, Norfolk, Pensacola, Philadelphia, Portland Ore., San Diego, San Francisco, San Pedro, Sabrine, Savannah, Seattle, Tacoma, Texas City, Wilmington.
Mexico - -	Minatitlan, Puerto Mexico, Tampico, Tuxpan.
Central America and West Indies	Aruba, Curacao, Limon, Kingston, Santa Marta, Tela, Trinidad.
South America -	Bahia Blanca, Buenos Ayres, Concepcion, La Plata, Ramallo, Rosario, San Nicolas, Santa Fe, Villa Constitucion.
ASIA.—	Abadan, Basra, Balik Papan, Bombay, Calcutta, Colombo, Jaffa, Karachi, Larnaca, Rangoon, Singapore, Smyrna, Tripoli.
AUSTRALIA.—	Adelaide, Brisbane, Bunbury, Freemantle, Melbourne, Port Augusta, Port Lincoln, Port Pirie, Sydney, Wallaroo.
NEW ZEALAND.—	Auckland, Bluff, Cairns, Christchurch, Dunedin, Lyttleton, Napier, New Plymouth, Port Chalmers, Timaru, Wanganui, Wellington.
EUROPE.—	
Russian, Northern :	Archangel, Igarka, Kovda, Leningrad, Murmansk.
Russia, Southern :	Batoum, Marinpol, Nicolaieff, Odessa, Theodosia, Tuapse.
Norway - -	Drammen, Fredrikstad, Odda, Oslo, Risor, Sarpsborg, Skien, Tofte.
Sweden - -	Gamelby, Gefle, Gothenburg, Hallstanas, Hernosand, Kalajaki, Norrkoping, Skoghall, Soderharm, Stockholm, Sundsvall.
Finland - -	Hango, Helsingfors, Kirkonheim, Kotha, Makslahti, Rahja, Raumo, Trangsund, Viborg, Walkom.
Poland - -	Gdynia.
Germany - -	Bremen, Elbing, Hamburg, Konisburg, Wismar.

EUROPE.—*contd.*

Holland	Amsterdam, Delfzyl, Groningen, Rotterdam.
Belgium	Antwerp, Bruges, Ghent.
France	Bayonne, Bordeaux, Brest, Caen, Calais, Dieppe, Le Havre, Lezadrieux, Marseilles, Nantes, Paimpol, St. Malo, Tonnay-Charente.
Portugal	Faro, Lisbon, Oporto, Portimao, Setubal.
Spain	Aquilas, Alicante, Almeric, Aviles, Burriana, Cadiz, Cartagena, Castellon, Denia, Gandia, Huelva, Malaga, Seville, Valencia.
Italy	Catania, Genoa, Giardini, Leghorn, Marina de Carrara, Messina, Palmero, Rezzio Calabria.
Greece	Catacola, Patras, Vostizza.
Turkey	Istanbul, Izmir.
Roumania	Braila, Constanza, Galatz, Ismail, Kilia, Reni.

Grain is imported from Canada, United States, South America, Australia, India, the Persian Gulf and Black Sea ports. Motor spirit and other petroleum products arrive from Mexico, West Indies, Trinidad, United States, Black Sea, Persia, and East Indies. Bristol is one of the chief ports in the Kingdom for the banana trade from West Indies and Central America. The general cargo trade between the port and Canada, United States and Eupore is well maintained. The import trade from Australia and New Zealand consists of frozen produce, provisions and general goods.

III.—Source of Water Supply.

(*a*) *For the Port.*

(*b*) *For shipping.*

The water used in the port and by ships in the docks is supplied by the Bristol Water Works Company. Hydrants are provided on the quaysides.

Where called for, water tanks in all vessels were washed out, cleansed, and cement washed under the supervision of the port sanitary inspectors.

(*c*) *No. of water boats and their sanitary condition.*

There are no water boats in use at Avonmouth or Portishead.

One water boat is in use at Bristol docks. This vessel is inspected periodically by the port sanitary inspector, and is cleansed and cement washed when necessary.

IV.—Port Sanitary Regulations, 1933.

(1) *Arrangements for dealing with declarations of health.*

(2) *Boarding of vessels on arrival.*

(3) *Notification to the authority of inward vessels requiring special attention.*

These regulations came into operation on the 1st May, 1933. The regulations largely made compulsory in British ports the routine which has been adopted in the port of Bristol for some time now. The master of a ship from foreign is required to sign a declaration of health in an approved form, and according to the information thus given by the master, the further action to be taken in regard to his ship is detailed.

The following definitions in the regulations are important :—

(i) *Foreign-going ship* is " a ship employed in trading or going between some place or places in Great Britain and Northern Ireland, and some place or places situate beyond the following limits, that is to say, the coasts of Great Britain and Ireland, the Channel Islands, the Isle of Man or the continent of Europe, between the river Elbe and Brest inclusive."

(ii) *Foreign port* is " a port or place situate elsewhere than in Great Britain, Ireland, the Channel Islands, or the Isle of Man."

The medical officer of health is required by the regulations to issue periodically a list of infected, suspected or suspicious ports and seaboards.

The scheme of the port sanitary department in relation to the boarding on arrival and visiting of ships in order to comply with the regulations is as follows :—

Officers are on tidal duty at Avonmouth two hours before and two hours after high water, and at Bristol, one hour before and one hour after high water.

(*a*) *Coastwise ships which have not been foreign.*

These are supervised by the port sanitary officer, but not necessarily boarded on arrival. Scrutiny is kept over them concerning illness on board, and if illness be reported or ascertained, the medical officer is notified of the circumstances. A declaration of health is not required from the master nor do the regulations lay down obligation as to the flying of flags.

(*b*) *Ships from foreign ports, but not foreign going ships.*

The port sanitary officer on tidal duty boards all these ships on arrival. The medical officer does not visit if there be no illness or unusual circumstance. A declaration of health is not required, but compliance with the regulations concerning the flying of flags is necessary.

(*c*) *Foreign going ships.*

There are three classes of such ships :—

(i) If the ship be from a port on the list, the medical officer visits as well as the port sanitary officer. A declaration of health is required from the master, as well as compliance with the regulations concerning flags.

(ii) The ship may be from a foreign port not on the list. The port sanitary officer boards on arrival, but the medical officer does not visit unless there be a case of illness on board, or other circumstance the inspector considers it proper to report to the medical officer. A declaration of health is required, as well as compliance with the regulations concerning flags.

(iii) The ship may have been at some other port in the United Kingdom, prior to coming to Bristol. The port sanitary officer boards as soon after arrival as possible. The medical officer does not visit except in cases of illness or other unusual circumstance. A declaration of health will have been given at the previous port, and a second declaration will not be required from the master unless the call at the previous port was only for the landing of passengers or mails without the main cargo having been worked. Only in exceptional circumstances are flags made necessary by the regulations. Ships from infected, suspected or suspicious ports or seaboards whether they have arrived at Bristol direct from foreign, or have first touched at any other United Kingdom ports, are visited every twenty-four hours, and enquiry made as to sickness amongst the crew.

Complete co-operation exists between H.M. customs officers and the port sanitary staff, and we are especially indebted to the collector for his help in arriving at a working agreement concerning the regulations. If the customs officer has left the ship before the port sanitary officer boards, the declaration of health is put in the letter box by the customs officer at the first opportunity (Bristol—40 Prince Street ; Avonmouth—Port Sanitary Offices). If the customs officer has not boarded by the time the port sanitary officer leaves, the port sanitary officer gives to the master an appropriate certificate for the information of the customs officer.

On page four of the statutory declaration of health, opportunity has been taken to give a few directions to the master as follows :

(*i*) The master of a foreign-going ship approaching from a foreign port shall ascertain the state of health of all persons on board, fill in and sign a declaration of health in the prescribed form (herewith), and deliver this declaration to the customs officer or the port sanitary officer, whichever shall first board the ship.

(*ii*) Wireless Messages. If the answer to any of the six questions on page 1 of this declaration of health is "yes" ; if there be any person on board with symptoms of infectious disease (other than tuberculosis) ; or if there are any circumstances requiring the attention of the medical officer, the master must send a wireless message to the port medical officer addressed "Portelth, Bristol" or through the ship's agents (if approved) between four and twelve hours of time of arrival. The expected time of arrival should be given, and if code is used, it must conform with the medical section of vol. II of the international code of signals (British edition, p. 229).

(*iii*) Use of flags and signals. Ships from foreign must show one of the following signals (whichever is appropriate) until free from control under the regulations.

(*a*) By day :—

When the ship is within three miles of the coast or within the port waters :

(i) Q flag, signifying—"My ship is healthy and I request free pratique," *or*

(ii) The two flag signal QQ, signifying—"My ship is suspect, that is to say, I have had a case, or cases of infectious disease more than five days ago or there is an unusual mortality among rats on board" ; *or*

(iii) The two flag signal QL : signifying—"My ship is infected, that is to say, I have had a case, or cases of infectious disease less than five days ago."

(*b*) By night :—

When the ship is in the port waters a red light over a white light, the lights not more than six feet apart, and signifying " I have not free pratique."

(*iv*) Article 16 of the regulations states :—"Where a ship arrives from a foreign port no person other than a pilot, a customs officer, an immigration officer or a person acting in the execution of these regulations shall, without the permission of the medical officer or other authorised officer of the sanitary authority board or leave the ship until it is free from control under these regulations, and the master shall take all steps necessary to secure compliance with this provision.

The maximum penalty for breach of the Port Sanitary Regulations, 1933, is £100.

For use of port sanitary staff.

(*i*)—Drinking water taken at :

(*ii*)—P.M.O. visited

Action and observations :

		Date	Port of issue	Valid or invalid
(*iii*)—Certificate	Deratisation or exemption			

(*iv*)—Any special or unusual circumstances and action taken.

The port sanitary authority asked the minister of health for his approval of Bristol as a designated port under the regulations (article 6) concerning wireless messages, and in due course, the minister's approval was received. In the *London Gazette* of 31st October, 1933 the following notice appeared :

" Port Sanitary Regulations, 1933.

The Minister of Health hereby declares in pursuance of the above mentioned Regulations that the provisions of Article 6 of the Regulations (relating to the sending of wireless messages) shall apply on and from the 1st day of February, 1934, until he shall otherwise declare, to the districts of the following port sanitary authorities, viz. : Bristol, Liverpool, London, Plymouth, Southampton."

We are fortunate in our co-operation with the haven master and his pilots. Pilotage is compulsory except for coastwise trading vessels not carrying passengers. A pilot boarding a foreign-going or home trade vessel inward bound, in or anywhere to the westward of Walton Bay, hands to the master a copy of a leaflet printed in English, Spanish, and Greek, as follows :—

> "Bristol Port Sanitary Authority.—
>
> "If it is necessary for masters of vessels to transmit visual signals to the port medical officer of health in connection with the instructions on the back of the declaration of health form, pilots of inward bound vessels will assist the master in doing so through Walton Bay signalling station."

All pilots have in their possession copies of the declaration of health form, and their help is much appreciated for it expedites the dealing of vessels by the port sanitary officers.

Further, local ship owners and agents notify the port medical officer of health of expected arrivals and masters of locally-owned vessels report by wireless to the owners the time they expect to arrive in port, with information regarding the number of passengers and aliens on board.

(4) *Mooring Stations.*

With the concurrence of the H.M. customs and the docks authority, the following mooring stations have been approved :

(A) *Under article* 10 (1)

Avonmouth	(a) North Wall, Royal Edward dock ; (b) Dolphin Buoy ;
Bristol	Railway wharf (two berths).
Portishead	Berth at shed no. 1 Portishead dock.

(B) *Under article* 10 (2)

Avonmouth, Bristol and Portishead—Walton Bay.

(5) *Particulars of any standing exemptions from the provisions of article* 14.

Because of the scheme already detailed no standing exemptions for the purpose of article 14 (1) of the regulations have been granted so far, as it is preferred that any unusual circumstance be reported to the medical officer at once and then a decision made as to the appropriate action. This matter was discussed fully with the officers of H.M. customs, and the arrangement is working very satisfactorily.

(6) *Experience of working article* 16.

We particularly welcomed article 16 of the regulations for it overcame a difficulty we had, more especially at Avonmouth. I refer to the unauthorised person jumping on to a ship in the hope of obtaining work for his laundry, or order for his trade in provisions, etc. Previous to the regulations we could only prevent such persons from leaving the ship until they had given their names and addresses to us, i.e., not before they might have become contacts of dangerous infectious disease.

The new regulations distinctly state that no person, other than a pilot, a customs officer, or an immigration officer, or a person acting in the execution of these regulations shall, without permission of the medical officer, board or leave a ship until it is free from control, and the master is required to take all steps necessary to secure compliance with these provisions.

(7) *What, if any, arrangements have been made for*

(*a*) *Premises and waiting rooms for medical examination.*

Medical inspections almost invariably take place on board ship. If circumstances or findings make more detailed examinations necessary, arrangements are made for attendance at the port sanitary offices, either at Bristol or Avonmouth as appropriate.

(*b*) *Cleansing and disinfection of ships, persons and clothing and other articles.*

Infected quarters are fumigated with sulphur, or by spraying with disinfectant ; and the bedding, clothing, etc. is removed by means of motor vans to the central disinfecting station, Bristol, and there disinfected by steam. Laundry from any suspicious ship is taken for disinfection by the sanitary staff to Bristol.

Cleansing of persons is carried out at the bathing centre at the same disinfecting station to which patients are conveyed by the Health Committee's motor ambulance. Facilities are provided for bathing both males and females, and attendants are available on the premises to supervise the operation.

(*c*) *Premises for the temporary accommodation of persons for whom such accommodation is required for the purposes of the regulations.*

The isolation hospitals at Ham Green and Novers Hill are available on need arising.

(*d*) *Hospital accommodation available for plague, cholera, yellow fever, smallpox, and other infectious disease.*

Patients suffering from any infectious disease and cases requiring observation, are removed to the city isolation hospital (260 beds) at Ham Green, Pill. Small-pox cases are removed to Novers Hill Hospital (47 beds).

(*e*) *Ambulance transport.*

The motor ambulances belonging to the Health Committee are used for this purpose.

(*f*) *Supervision of contacts.*

Contacts of infectious cases if not removed to hospital are kept under observation by the port sanitary officers, and in the event of their proceeding to an address outside the city, the medical officer of health of the district concerned is advised. All ships from infected or suspicious ports are visited daily during their stay in the docks by a sanitary inspector. He enquires as to the health of the crew and those working on the ship.

(8) and (9) *Arrangements for (a) bacteriological or pathological examination of rats for plague and (b) for other similar examinations.*

Arrangements continue with the Bristol University for the systematic examination of rats, and for any special examinations which may be required. Since the opening of the new department of preventive medicine of the University at Canynge Hall, all bacteriological and pathological work is done on behalf of the city and port under agreement with the University.

During the year under review 606 rats were examined for plague, 285 being from the ships at the ports and 321 from the sheds and quays at the docks. The ratio of rats examined during the year was 16.22 per cent. from ships and 16.5 per cent. from sheds and quays.

(10) *Arrangements for the diagnosis and treatment of venereal disease amongst sailors under international arrangements.*

(*a*) Enquiries are made by the medical officers and port sanitary inspectors of the responsible officers on all ships for the history of cases that may have been reported during the voyage.

(*b*) Examination of the crews of ships by a port medical officer results in the detection of a number of venereal cases not reported by the masters as above. During 1933, there were 25 such cases.

Leaflets stating the times of attendance at the Health Committee's venereal diseases clinic at the Bristol Royal Infirmary are given to the masters of vessels and to the infected. Treatment at this institution is free of cost.

The following particulars relate to seamen treated at the municipal clinic during the year :

			DIAGNOSIS.			
1932		1933	Syph.	Soft Sore	Gon.	Non-Ven.
	CASES					
187	Total	194	83	—	63	48
158	New cases	165	58	—	59	48
	ATTENDANCES					
802	Total	726	478	—	182	66
508	New cases	452	225	—	161	66
	INPATIENTS					
8	Total	6	4	—	2	—
8	New cases	6	4	—	2	—
	INPATIENT DAYS—					
170	Total	156	131	—	25	—
170	New cases	156	131	—	25	—

Table C.

Cases of infectious sickness landed* from vessels.

Disease	No. of cases during 1933		No. of vessels concerned	Average no. of cases for previous 5 years
	Passengers	Crew		
Infectious diseases, including :				
Malaria	—	4	4	6·8
Diphtheria	—	1	1	0·4
Influenza	—	5	5	6·0
Whooping cough...	1	—	1	—
Dysentery...	—	1	1	·4
Pulmonary tuberculosis... ...	—	6	6	3·0
Venereal diseases	—	25	23	32·0
Climatic bubo	—	3	—	0·8
Chicken pox	—	1	1	—

Other diseases not included in Table C above landed from vessels.*

Disease	No. of cases during 1933		No. of vessels concerned	Average no. of cases for previous 5 years
	Passengers	Crew		
Rheumatism	—	4	3	2·2
Beri-beri	—	2	1	·6
Anaemia	—	1	1	—
Cancer	—	1	1	—
Diseases of nervous system ...	2	8	9	5·6
,, ,, circulatory system ...	—	2	2	2·6
,, ,, respiratory system ...	—	2	2	9·0
,, ,, digestive system ...	—	20	20	16·4
,, ,, genito-urinary system...	—	1	1	2·2
,, ,, skin and cellular tissue	—	5	4	10·6
Traumatism	—	3	3	12·4
Ill-defined diseases	—	13	12	5·0
Septic wounds	—	2	2	2·1
Diabetes	1	—	1	·2

* Includes only cases requiring medical attention, but all were not removed from ships to hospital.

Table D.

Cases of infectious sickness on vessels during voyage but disposed of prior to arrival.

Disease	No. of cases during 1933		No. of vessels concerned	Average no. of cases for previous 5 years
	Passengers	Crew		
Infectious diseases, including :				
Smallpox	—	2	1	·6
Typhus	—	1	1	—
Malaria	—	5	5	9·6
Influenza	—	17	3	7·6
Dysentery	—	1	1	·2
Pulmonary tuberculosis... ...	—	2	2	1·0
Venereal disease	—	3	2	3.8

Other diseases not included in Table D above on vessels during voyage but disposed of prior to arrival.

Disease	No. of cases during 1933		No. of vessels concerned	Average no. of cases for previous 5 years
	Passengers	Crew		
Cancer	1	—	1	·2
Diseases of nervous system ...	—	1	1	1·0
,, ,, circulatory system ...	1	3	4	2·6
,, ,, respiratory system ...	—	3	3	2·8
,, ,, digestive system ...	1	6	6	5·8
,, ,, genito-urinary system	—	1	1	1·4
,, ,, skin and cellular tissue	—	1	1	1·2
Traumatism	—	5	5	3·0
Ill-defined diseases	—	5	4	2·6

Vessel on which a case of typhus fever had occurred.

Through the courtesy of the port health officer at Rotterdam, information was received of a case of typhus fever having been left at Rotterdam, from the Greek steamer, "Alexandra," bound for Avonmouth.

This exchange of information is of particular interest as it is one of the first of the direct port-to-port notifications arranged for by circular 1171 of the ministry of health.

The ship arrived at Avonmouth on the 21st July, and was met by a medical officer who elicited from the captain that there was no illness then on board, and that no disinfection had been carried out at Rotterdam. The seriousness of the nature of the case had not become evident until after the ship's departure from Rotterdam. The medical officer ordered the ship to be taken to the inner mooring station, where she remained under control until all appropriate measures had been taken. Everybody on board was examined and no evidence of illness was observed amongst the crew. The crew's quarters, however, were considerably infested with bed bugs, cockroaches, spiders, etc., and because of this and the considerable period after the ship had set out on her voyage from the Black Sea before the man sickened, allowing of the possibility of infection of the vermin by typhus, fumigation by cyanide of the crew's quarters was considered necessary, and arrangements made accordingly. The crew were bathed, and their clothing disinfected.

The new port sanitary regulations helped considerably in the appropriate handling of the vessel. The ship arrived at 6 p.m. on the 21st July, and all appropriate measures had been taken, including fumigation of the quarters and bathing of the crew, by the afternoon of the 23rd July. There were no further developments of the disease.

V.—Measures against Rodents.

(1) *Steps taken for detection of rodent plague* (*a*) *in ships in the port,* (*b*) *on quays, wharves, warehouses, etc.*

Every ship from foreign is boarded immediately on arrival by a port sanitary inspector and also by a port medical officer, if from a plague-infected or suspicious port. These officers satisfy themselves as to the condition of the ships regarding rats and inspect the last certificate of deratisation or exemption. The holds are examined immediately they are opened.

During a ship's stay in the port and while the cargo is being discharged she is continuously observed for signs of rats. The port sanitary rat officers set traps and make every effort to obtain samples of rats for pathological examination.

The presence of dead rats is always treated as urgent. Immediate pathological examination is made and appropriate action taken according to circumstances.

Sampling of the rat population of the warehouses and sheds is done constantly and the presence of rodent plague excluded by pathological examination.

Tables E and F show the work done in this connection at the port during 1933.

(2) *Measures taken to prevent the passage of rats between ships and the shore.*

The following precautions are taken on ships from plague-infected ports :—

> Where rat guards are carried by the vessel, these are required to be applied to stop the passage of rats from the ship to the shore. Rat guards of a special pattern can be hired for a nominal fee from the port sanitary authority. Owing to the inefficiency of rat guards generally the following additional precautions are taken. The mooring ropes are covered with tar which is kept moist and freshly applied night and morning ; the same treatment is applied to the wire hawsers, and also to the manilla ropes by means of a piece of hessian cloth tied thereon. Gangways are kept raised whenever possible, or alternatively are well lighted during the night, and the sides and undersides kept moist by means of tar. On suspicion the additional precaution is taken of booming the ships off the quayside by means of rafts. Deratisation by fumigation is insisted upon when a ship is found to be rat infected and contemplates remaining in the docks.

(3) *Methods of deratisation of* :

(*a*) *Ships.*

Trapping, fumigating with sulphur, and with hydrocyanic acid. Fumigation is carried out by private firms, and is always done under the supervision of the port sanitary inspectors. The method adopted is by burning sulphur, 3-lbs. being allowed for each 1,000 c.ft. of space and the exposure lasting for at least eight hours. To ensure complete combustion of the sulphur, flattened trays have been specially made and these stand in larger trays containing water. Cotton waste well soaked in wood alcohol reaches through the sulphur to the bottom of the tray. This method has been found to give very good results.

Cyanide fumigation is performed by the spraying of liquid hydrocyanic acid, or by using Zyklon B. It is carried out by private firms under the supervision of the port sanitary officers.

During 1933, 26 deratisation and 113 deratisation exemption certificates were issued. Deratisation was carried out by fumigation in every instance, 10 of the ships being done by sulphur and 16 by cyanide, 12 of the latter being by Zyklon B. We consider that trapping may give useful information as regards the rat population of a ship, but that it is not an effective method of deratisation, if deratisation be called for.

(*b*) *Premises in the vicinity of the docks and quays.*

Trapping and laying down of poisoned baits continue constantly.

(4) *Measures taken for the detection of rat prevalence* :

(*a*) *In ships.*

Under "steps taken for detection of rodent plague" the method of dealing with ships from foreign is discussed. The port sanitary inspectors board all inward vessels and examine them for rat indications. This is part of the routine duties of the port inspectors. The rat officers also search ships and set traps during the stay in port.

(*b*) *On shore.*

Routine inspection of all sheds and warehouses in the vicinity of the docks is carried out by the port sanitary staff. Traps and poisoned baits are laid wherever and whenever indications are found of the existence of rats.

(5) *Rat-proofing* :

(*a*) and (*b*) *ii. Docks, wharves, warehouses, etc.*

As stated in previous reports many of the sheds and warehouses on the quay side have been built or re-built during the last few years and may be considered to be rat-proof. Representation is made to the docks authority from time to time when opportunity occurs concerning appropriate rat-proofing; for example, during the year the roof of one shed has been entirely renewed, flooring and footings have been renewed and wooden pipe casings removed.

(*b*) *i. In ships.*

When ships are examined for indications of rats for the purpose of issuing a deratisation or deratisation exemption certificate, much attention is paid to the question of harbourage. Before a certificate is issued the master of the ship has to remove the harbourage to the satisfaction of the port medical officer of health.

RATS DESTROYED IN 1933.

Table E. (1) *On Vessels.*

Number of Rats	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total in Year
Black	173	59	82	395	39	146	514	36	102	75	58	57	1,736
Brown	—	8	—	—	—	—	13	—	—	—	—	—	21
[Mice	1	—	—	—	—	—	—	—	—	—	1	—	2
Species not recorded	—	—	—	—	—	—	—	—	—	—	—	—	—
Examined	20	14	19	19	25	17	24	32	29	21	41	24	285
Infected with plague	—	—	—	—	—	—	—	—	—	—	—	—	—

Table F. (2) *In docks, quays, wharves and warehouses.*

Number of Rats	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total in Year
Black	75	88	100	153	178	52	56	133	58	100	172	82	1,099
Brown	97	81	86	70	102	74	69	77	69	79	109	87	900
[Mice	18	19	78	15	24	11	8	10	9	44	70	50	356
Species not recorded	—	—	—	—	—	—	—	—	—	—	—	—	—
Examined	21	33	19	24	15	4	5	11	9	60	85	35	321
Infected with plague	—	—	—	—	—	—	—	—	—	—	—	—	—

Table G.

Measures of rat destruction on plague "infected" or "suspected" vessels or vessels from plague infected ports arriving in the Port during the year.

Total number of such vessels arriving. 1.	Number of such vessels fumigated by SO_2 2.	Number of rats killed. 3.	Number of such vessels fumigated by HCN. 4.	Number of rats killed. 5.	Number of such vessels on which trapping, poisoning, etc., were employed. 6.	Number of rats killed. 7.	Number of such vessels on which measures of rat destruction were not carried out. 8.
27	—	—	—	—	13	—	14*

* These ships were all examined for rat indications, but no measures were taken, either because there was no evidence of rats, or because of very short stay in port.

Table H.

Deratisation certificates and deratisation exemption certificates issued during the year.

Net Tonnage.	No. of ships.	No. of deratisation certificates issued.					No. of deratisation exemption certificates issued.	Total certificates issued.
		After fumigation with			After trapping, poisoning, etc.	Total.		
		H.C.N.	Sulphur	H.C.N. and Sulphur.				
1.	2.	3.	4.	5.	6.	7.	8.	9.
Ships up to 300 tons	16	—	—	—	—	—	16	16
,, from 301 tons to 1,000 tons	24	—	1	—	—	1	23	24
,, from 1,001 ,, 3,000 ,,	35	3	6	—	—	9	26	35
,, from 3,001 ,, 10,000 ,,	64	13	3	—	—	16	48	64
,, over 10,000 ,, ...	—	—	—	—	—	—	—	—
TOTALS ...	139	16	10	—	—	26	113	139

VI. Hygiene of crews' spaces.

Table J—Classification of nuisances.

Nationality of vessel	Number inspected during the year	Defects of original construction	Structural defects through wear and tear	Dirt, vermin and other conditions prejudicial to health
British	1,652	3	84	222
Other nations ...	475	—	17	96
Totals	2,127	3	101	318

VII.—Food Inspection.

(1) (*a*) *Public Health* (*Imported Food*) *Regulations*, 1925.

Public Health (*Imported Food*) *Amendment Regulations*, 1933

Resort to legal proceedings was not necessary during the year.

Quantity of food imported and dealt with :—

Fresh, frozen or canned meat, etc.		
Frozen beef	12,984	qrs.
,, mutton and lamb	481,192	carcases.
,, pork	20,209	carcases.
,, pork legs	1	bag
,, offal	4,646	packages.
Cured or salted beef and pork	72	tons
Bacon and hams	452	tons
Canned meat	564	tons
Canned fish	318	tons
Fresh, dried and canned fruit, etc.		
Bananas	68,647	tons
Green fruit	28,266	tons
Dried fruit	4,712	tons
Vegetables—raw	3,746	tons
canned	723	tons
Vegetables in brine	466	tons
Canned fruit	3,277	tons
Fruit pulp	458	tons
Other foods :		
Butter, cheese and lard	25,367	tons
Grain	938,122	tons
Flour and meal	106,583	tons

Unsound food destroyed or otherwise dealt with so as not to be used for human food.

	Tins	Tons.	cwts.	qrs.	lbs.
Fresh or frozen meat, etc.					
Beef		24	7	—	16
Mutton and Lamb		2	18	2	8
Pork		—	3	—	21
Canned goods.					
Apples	22		1	0	20
Apricots	33	—	—	3	18
Asparagus	2	—	—	—	2
Cherries	117	—	1	0	27½
Crab	6	—	—	—	2½
Grape fruit	8	—	—	—	13
Hams	4	—	—	1	17
Loganberries	2	—	—	—	2½
Milk (condensed)	183	—	—	3	7
Mutton	2	—	—	—	12
Peaches	44	—	1	0	10
Peas	10	—	—	—	25
Pears	34	—	—	3	24
Pineapples	821	—	12	0	4
Salmon	18	—	—	—	18
Tomatoes	91	—	1	0	15
Fruit and vegetables.					
Apples, cider		132	3	0	0
Apples		—	11	2	1
Blackcurrant pulp		—	4	0	0
Carrots		—	1	0	0
Coconut (desiccated)		—	1	1	0
Cauliflower in brine		—	4	0	0
Dates			1	0	12
Fruit salad, dried		—	1	3	0
Grape fruit		3	3	0	0
Onions		1	7	0	0
Oranges		14	13	0	0
Potatoes		65	3	0	0
Prunes (dried)		—	18	2	0
Sultanas		—	2	2	28
Vegetables in brine		—	4	0	0
Other foods.					
Barley		6	0	3	0
Cheese		—	2	1	4
Cocoa beans		—	4	0	0
Flour		3	9	1	12
Lard		15	18	2	0
Maize		162	14	2	14
Oats		—	13	3	0
Wheat		31	14	0	16
Rice		—	2	0	0
Rice, flaked		—	1	0	0
Sugar		—	4	0	0
		468	12	2	12½

	Cattle.	Pigs.
Total no. of animals from Ireland during the year which were dead on arrival ...	3	—
No. slaughtered at the lairs on arrival owing to injuries	3	—

(*b*) *Public Health* (*Imported Milk*) *Regulations*, 1926.

No milk (other than condensed evaporated or dried) was imported during the year.

(*c*) *Public Health* (*Preservatives, etc., in Food*) *Regulations*, 1925 *to* 1927.

The following samples were submitted to the public analyst during the year and examined by him for the presence of preservatives.

Almonds, ground	1
Apple juice (cider)	1
Apricots, dried	5
Asparagus, canned	1
Blackcurrant pulp	5
Cherries in syrup	1
Cider	1
Currants	1
Fruit salad, dried	1
Gooseberry pulp	3
Lemonade tablets	1
Meat extract	1
Orange juice	1
Onions	1
Pears, canned	1
Prunes, dried	7
Plum pulp	1
Prawns	1
Protein meat meal	1
Raisins	28
Raspberry pulp	4
Redcurrant pulp	1
Salmon, canned	2
Sardines, canned	2
Strawberry pulp	15
Sultanas	4
Sweet corn	1
Tomatoes, canned	1
Walnuts	1
	94

During 1933, on the following occasions, articles examined contained preservative in excess of the amounts allowed by the regulations :—blackcurrant pulp, orange juice, raisins, raisins, raisins, raspberry pulp. Appropriate action was taken in each case according to the preservatives in food regulations.

(2) *Shellfish.*

There are no shellfish beds or laying within the jurisdiction of the Bristol Port Sanitary Authority.

(3) (*a*) and (*b*) *Samples of food examined by bacteriologist and analyst.*

Article.	Examination for	Result.
Flour ...	Water damage	No evidence of water damage.
,, ...	Presence of contamination	None present.
Rice ...	Soundness ...	Genuine.
,, ...	,, ...	Genuine.
Maize ...	Fermentation	Very foul smell of decomposing matter. Grains darkened and wet.
,, ...	,, ...	Strong smell—not wet, a few kernels discoloured.
,, ...	,, ...	Offensive smell—natural colour.
Salmon ... (canned)....	Metals ...	None present.
Sardines ...	,, ...	,, ,,
,, ...	,, ...	Lead (Pb) .0005%
Lamb tongue	,, ...	None present.
Pineapples ... (tinned) ...	,, ...	(Solids) Lead (Pb) nil. Tin (Sn) traces. (Liquid) Lead (Pb) nil. Tin (Sn) .0043%.
,, ...	,,	(Solids) Lead (Pb) nil. Tin (Sn) traces. (Liquid) lead (Pb) nil. Tin (Sn) .008%
Lemonade tablets ...	,, ...	None present.

MISCELLANY.

Parrots (Prohibition of Import) Regulations, 1930.

Nine vessels arrived in 1933 with 11 parrots on board. Their importation was prohibited under the regulations. One parrot was destroyed under supervision.

Canal Boat Inspection.

No canal boats were in use in the Bristol district during 1933.

Medical Inspection of Aliens.

Annual return by the medical inspector of aliens for year ended 31st December, 1933.

	Total	Number inspected by the medical inspector	Number subjected to detailed examination by the medical inspector	Certificates Issued					Transmigrants	
				Lunatic idiot or M.D.	Undesirable for medical reasons	Physically incapacitated	Suffering from acute infectious disease	Landing necessary for adequate medical examination	Verminous	Trachoma favus, etc.
1.				(a)	(b)	(c)	(d)	(e)		
(*a*) Total number of Aliens (excluding Alien Seamen) landing at the Port	212	178	11	..	..	3	..	..	..	..
(*b*) Aliens refused permission to land by Immigration Officer	17	..	..	..	..	..	..	..	..	..
(*c*) Transmigrants	..	..	..	..	..	..	..	..	..	..
2. Total Aliens arriving at the Port	229	178	11	..	..	3	..	..	..	..

3. (*a*) Total number of vessels carrying Alien passengers 78
(*b*) Number of such vessels dealt with by the Medical Inspector .. 59

TABLE A.

Analysis of Aliens landing (see 1 (*a*)).	Total
Residents returning	7
In Transit	55
Visitors	70
Business	4
Diplomatic	4
Seamen	8
Contract Seamen	51
Ministry of Labour Permit (M.L.) :—	
(*a*) Males	4
(*b*) Females	1
(*c*) Children	..
Aliens coming to settle not holding M.L. permits :—	
(*a*) Males	..
(*b*) Females	5
(*c*) Children	3
Total	212

TABLE B.

Classification of Aliens referred to the Medical Inspector by the Immigration Officer for detailed examination—	Examined	No. of Certificates issued.
(i) holding Ministry of Labour permits	3	..
(ii) intending to remain in the country over 3 months	1	..
(iii) intending to make their home in this country	..	..
(iv) students coming for educational purposes	2	..
(v) in regard to whom there is any mention of health as a reason for their visit ..	1	1
(vi) who appear to the I.O. (*a*) not to be in robust health ; (*b*) to be mentally or physically abnormal or sub-normal ; (*c*) to be dirty in their person or (*d*) are selected for special reasons	3	2
(vii) seamen travelling as passengers	1	..
Total	11	3

The aliens who land at Bristol are almost all first-class passengers, in transit or visitors, from the West Indies, and medically present no difficulties. Those referred for examination are examined on board while the ship is in the locks. Three certificates were issued during the year under the Aliens Order, 1920, all concerning aliens who were suffering from conditions " which may interfere with the capacity of the alien to support himself or his dependants."

CITY AND COUNTY OF BRISTOL

EDUCATION COMMITTEE

ANNUAL REPORT

OF THE

SCHOOL MEDICAL OFFICER

R. H. PARRY, M.D., B.S. (Lond.), D.P.H.

1933

(TWENTY-SIXTH YEAR)

BRISTOL:
Lodge & Son, 43 West Street

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BRISTOL EDUCATION COMMITTEE.

Chairman—Councillor Walter Bryant.

Vice-Chairman—Alderman W. H. Ackland, J.P.

Hygiene Sub-Committee.

Chairman—Councillor M. Giles, J.P.

Alderman W. H. Ackland, J.P.

Councillor Walter Bryant.

Rev. W. Dillon, B.A.

Mrs. M. Finn.

Councillor A. L. H. Smith.

W. R. Straker, Esq., M.A., J.P.

T. H. J. Underdown, Esq., M.A.

Councillor T. Thornton Wills.

Director of Education—

W. Ludford Freeman, M.A., LL.D.

CITY AND COUNTY OF BRISTOL.

Population (estimated Mid. 1933)	409,200
Elementary Schools—	
Number of Schools	105
Number of Departments	206
Number on Registers	56,614
Average attendance	50,159

SCHOOL MEDICAL STAFF.

School Medical Officer and Medical Officer of Health.

R. H. Parry, M.D., B.S. (Lond.), M.R.C.P., D.P.H.

Chief Assistant School Medical Officer.

A. A. Dalby, *M.C.*, M.R.C.S., L.R.C.P.

Assistant School Medical Officers (Whole-time).

A. F. Alford, M.B., Ch.B.
Monica A. O'Donohoe, M.B., Ch.B., Ba.O.
C. P. Hay, M.B., Ch.B., M.R.C.P. (E.), D.P.H.
G. C. Kelly, M.D., Ch.B., B.Sc., D.P.H.
A. R. Forbes, M.B., Ch.B., D.P.H.

Assistant School Medical Officer (Part-time).

S. B. Green, M.B., D.P.H.

Specialist Medical Officers.

Cardio-rheumatic Section	C. Bruce Perry, M.D., Ch.B., M.R.C.P.
Ear, Nose and Throat Section	G. R. Scarff, M.B., F.R.C.S. (E.)
Ophthalmic Section	R. R. Garden, M.A., M.B., D.O.M.S., D.P.H.
Orthopaedic Section	Hubert Chitty, M.S., F.R.C.S. K. H. Pridie, M.B., B.S., F.R.C.S. (Hon. Asst. Orthopaedic Surgeon).
X-ray Section	F. G. Bergin, M.R.C.S., L.R.C.P.

Dental Surgeons (Whole-time).

W. H. B. Stride, L.D.S., *Supervisory Dental Surgeon.*
A. Lethaby Morgan, L.D.S.
Muriel S. Cosh, B.D.S.
Marion Bentz, L.D.S.
H. Hazell, L.D.S. (Jointly with the Health Committee).

School Nurses.

L. Elkins, *Sister Superintendent.*

M. Bassett
V. P. Bowler
M. Bradley
P. M. Coates
E. M. Cording
H. L. Crocker
M. S. Dall
A. G. Davies
M. J. Devlin
E. S. Fisher
L. Foster
F. E. Fry
M. M. Huntley
W. Johnson
D. S. M. Leighton
D. Marshall (Res. 9/9/33).
A. J. Quance (Res. 30/11/33).
A. Robins
D. D. Weston
H. V. Wilson (Apptd. 16/10/33).

Masseuses and Remedial Gymnasts.

M. Rossi
B. D. Robertson
C. V. Robertson

Dental Assistants.

E. M. Batten
S. Wills
G. M. Needs
M. O. Coates
M. Stephens

Clerical Staff

A. C. J. Gregory *Chief Clerk.*

J. H. Middleton
W. H. Hauser
A. Mullany
S. I. Edwards
Ivy M. Porter
Letty Pow
Ethel Weaver
Emily F. Jones
G. G. Laing
R. H. F. Savage

SUMMARY OF WORK DONE DURING 1933.

School Medical Officers :—

No. of Visits to Schools - - - - -	754
No. of Children of Code Groups examined in Schools	14,930
No. of Re-examinations in Schools - -	8,123

Dental Surgeons :—

No. of Children examined - - - -	33,838
No. of Children treated - - - -	10,660

School Nurses :—

No. of Visits to Schools - - - -	2,229
No. of Examinations of Children - - -	130,524
No. of Homes Visited - - - -	14,305

SCHOOL CLINICS.

Total Attendances - 172,219.

	No. of Attendances.	*Work.*
Central Clinic ...	31,987	Inspection clinic work, treatment of minor ailments, ear, nose and throat clinic, zinc ionisation, dental treatment, refraction work, X-ray treatment and treatment of scabies cases.
Bedminster Clinic	34,783	Inspection clinic work, treatment of minor ailments, ear, nose and throat clinic, dental treatment and refraction work.
St. George Clinic	39,572	Inspection clinic work, treatment of minor ailments, ear, nose and throat clinic, dental treatment and refraction work.
West Bristol Clinic ...	25,739	Inspection clinic work, treatment of minor ailments, ear, nose and throat clinic, dental treatment and refraction work.
North Bristol Clinic ...	13,951	Inspection clinic work, treatment of minor ailments, dental treatment and refraction work.
Redcross St. Spec. School Clinic ...	21,235	Inspection clinic work, treatment of minor ailments, massage, electrical treatment, and remedial exercises.
Tuberculosis ... Dispensaries	3,369	Tuberculosis cases.
Cardio-rheumatic Clinic	1,298	Cases of heart disease and acute rheumatic infection.
Artificial Light ... Clinic	285	Cases of anaemia and debility.

CITY AND COUNTY OF BRISTOL
EDUCATION COMMITTEE.

REPORT
OF THE
SCHOOL MEDICAL OFFICER for the year ended 31st December, 1933.

INTRODUCTION.

The report which follows is a short account of the work done by the School Medical Department during another successful year.

I desire to draw special attention to the following :—

School Clinics. (page 13).

A great change has taken place in recent years in the distribution of the population of the City. This is evidenced by the appearance of new housing estates on the periphery of the City.

The school clinics, most of which were established from 12 to 15 years ago, no longer meet the needs of the school population. The clinics are nearly all converted houses, and are now much too small and ill-adapted for the work that is to be carried on in them. Further, their situation, in the light of the re-distribution of the population, is in many instances, most inconvenient.

The Education Committee, therefore, is faced with the problem of re-organising all the school clinics, and the first step in this direction has been taken by the co-operation of the Health and Education Committees in an effort to establish a central clinic for all the health services.

Malnutrition. (page 10).

I have frequently been asked to what extent malnutrition exists in Bristol. It is a very difficult question to answer.

The following figures indicate the amount of nourishment given by the Education Authority. They speak for themselves :

Free dinners	237,035
Free milk meals	42,359

It must be remembered that every effort is made at the earliest possible moment to discover those in need of more food, and when they are found, to provide the necessities. In this way, it cannot be said that malnutrition amongst school-children in the City really exists, although during the recent period of stress, there has been need for much more assistance in the form of nourishment.

Scalp Ringworm. (page 15).

I would draw attention to the fact that ringworm of the scalp has practically been eradicated from elementary school children by the adoption of X-ray treatment.

Treatment of chronic ear discharge. (page 17).

The dry treatment of these cases with iodised boracic powder has proved very successful and resulted in a considerable dimunition in numbers.

It is to be noted also that ionisation has been most successful for certain types of cases.

Dental treatment. (page 18).

Mr. W. H. B. Stride, L.D.S., who has been in the Committee's service for thirteen years, has been appointed as Supervisory Dentist, and in his report indicates the limitations of the present dental scheme, particularly with regard to its preventive aspect.

Orthopaedic Clinic. (page 20).

This clinic, situated at Redcross Street School, is now proving too small for its purpose, and it is hoped that more adequate accommodation may soon be found.

Treatment of pre-school children. (page 28).

A total of 525 children under five years of age received treatment at the school clinics including 110 new cases of squint and 81 orthopaedic cases.

Nursery Schools and Classes. (page 39).

Increased interest in the education of the pre-school child is being evinced both by Local Authorities and by the general public. If the School Medical Service is to fulfil its function in the prevention of disease, it is essential to have the child under medical supervision at the earliest possible opportunity. It is in this respect that Nursery Schools and Classes have proved of such enormous value. In a report on the St. Werburgh's Nursery School, Dr. Marguerite G. Hughes states :—

" The histories of all children admitted to the school, obtained from the Maternity and Child Welfare Department, show that though the majority were normal in infancy, there was definite deterioration after the age of 12 months.

This is indicated by the following figures which give the average weight on admission at different ages, whence it will be seen that on admission the older children are more below the normal weight for their age than the younger ones :—

Age on admission.	Average weight.		Normal weight.		Below normal.	
Years.	lbs.	ozs.	lbs.	ozs.	lbs.	ozs.
2	26	5	28	0	1	11
3	32	0	33	0	1	0
3½	31	7	35	0	3	9
4	31	13	37	0	5	3

During the 30 months since records of weights and heights have been kept, *i.e.*, since the school has been opened, it is found that the average increase in weight and height for each six months has been approximately normal for the age of the child."

Age Years.	Gain in weight.		Normal gain.		Increase in height.	Normal increase.
	lbs.	ozs.	lbs.	ozs.	inches.	inches.
2 —2½	1	15	2	8	1	1.75
2½—3	2	2	2	8	1.2	1.75
3½—4	2	0	2	0	1.4	1.75
4 —4½	2	2	2	0	1.4	1.75

Open-air school.

A site which has been used for many years by the Health Committee at Novers Hill as a smallpox hospital has become available to the Education Committee as an open-air school. The facilities at the present open-air school are insufficient and the transfer of this school to the Novers Hill site will result in greater efficiency with increased facilities for the present work and its future development.

My best thanks are due to Dr. W. Ludford Freeman, Director of Education and to Mr. M. O. McAuliffe, the Assistant Director of Education, for their ever-ready help, and elsewhere in the report I express thanks to the Head Teachers for their valuable assistance. Without their co-operation it would have been impossible to carry out the work.

I wish also to record my appreciation of the excellent work performed by the staff.

The report which follows has been collated by Dr. A. A. Dalby with the assistance of the Chief Clerk, Mr. A. C. J. Gregory.

R. H. PARRY,
School Medical Officer and
Medical Officer of Health.

I.—STAFF.

There were no changes in the Medical or Dental Staff during 1933.

Two School Nurses resigned—Miss D. Marshall and Miss A. J. Quance. Miss H. V. Wilson was appointed on 16th October, 1933. The other vacancy was not filled until 1934.

II.—CO-ORDINATION OF HEALTH SERVICES.

The scheme of co-ordinating the health services has worked smoothly and efficiently during the year.

The Chief Sanitary Inspector renders a periodic report on the sanitation of schools in the Bristol area for the information of the School Medical Officer.

Arrangements exist between the Education and Health Committees whereby children of pre-school age may be referred by the Maternity and Child Welfare Department to school clinics for the treatment of certain defects and diseases. Details of this scheme are given later in the Report in Section VII.

During 1933, the School Medical Officers, who are also Assistant Medical Officers of Health, gave a total of 141 sessions to duties under the Health Committee, as follows :—

Sessions devoted to Port work	86
Sessions devoted to Tuberculosis Dispensaries ...	50
Sessions devoted to Maternity and Child Welfare work	5
	141

III.—HYGIENE OF SCHOOL PREMISES.

Any defects discovered in schools by the School Medical Officer or his staff are reported to and remedied by the Sites and Buildings Department.

During the year the following new school departments have been opened :—

Marksbury Road Senior Boys'.
Marksbury Road Senior Girls'.
Filton Avenue Senior Boys'.
Filton Avenue Junior Mixed.
Fonthill Road Senior Mixed.
Knowle Park Senior Girls'.
Knowle Park Junior Mixed.
St. Patrick's R.C. Mixed and Infants'.

In addition, the Brislington Voluntary and Council Schools were taken over on the extension of the City Boundary.

IV.—MEDICAL INSPECTION.

(a) Arrangements for Inspection.

Except in the case of five Schools which have no suitable accommodation, the routine medical inspection of children is held on the school premises. The Head Teachers co-operate in the work very willingly, and their help is much appreciated.

A Nurse visits the school a few days before the Doctor is due, and enters details of height, weight and vision of the selected children on record cards. The Head Teacher sends a printed notice to all parents, stating date and time of the inspection, and inviting their attendance. The presence of the parents is most valuable, for not only is the Doctor able to obtain much useful information about the child, the family history, etc., but he has an opportunity of giving directly any required advice to the parent.

The schedule of medical inspection approved by the Board is followed.

(b) Groups Inspected.

The three code groups examined are :—

(*a*) *Entrants*—children who first entered school within the previous twelve months.

(*b*) *Intermediates*—children between the ages of eight and nine years.

(*c*) *Leavers*—children who have reached the age of twelve years.

Special cases are brought to the Doctor's notice during his visit to the schools, and re-examinations are made of children noted as having defects or ailments at a previous routine inspection.

In addition to the above, children aged fourteen years who are in attendance at Central Schools are now given a routine medical examination.

V.—FINDINGS OF MEDICAL INSPECTION.

A complete medical inspection was made of 14,930 children in the usual three age groups during 1933, and 23,846 were examined because of some special defect. In addition, 58 children (aged 14) were examined who were in attendance at the Central Schools.

(a) Malnutrition.

The number of children found suffering from malnutrition and requiring treatment was 42, while 114 were required to be kept under observation.

(b) Uncleanliness.

The School Nurses and Head Teachers have done splendid work in reducing the number of verminous cases found amongst school children, and one does not often find nowadays a really bad verminous head or scalp covered with impetigo. Minor cases of dirty heads are still numerous, but these are very much easier to deal with since the hair of girls is generally kept shorter now, and special combs have been introduced for the purpose of removing nits.

(c) Minor ailments and diseases of the skin.

Sixty-nine cases coming in this category were discovered on medical inspection, 40 of which required treatment.

(d) Visual defects and external eye disease.

Defective vision was reported in 895 cases, and there were 74 children discovered who suffered fron squint. In addition, there were 30 cases of external eye disease but this does not include special cases referred to the School Medical Officer.

(e) Nose and throat defects.

	Requiring treatment.	*Observation.*
Enlarged tonsils	244	263
Adenoids	76	56
Tonsils and adenoids ...	221	95
Other conditions	64	29

(f) Ear disease and defective hearing.

	Requiring treatment.	*Observation.*
Defective hearing	43	11
Otitis media and other ear disease	52	17

(g) Dental defects.

In order not to interfere with the scheme of dental inspection, the Medical Officers only report dental defects which they consider require urgent treatment in view of the condition of the child's health. 1,817 such cases were reported.

(h) Orthopaedic and postural defects.

Defects under this heading requiring treatment were 65 in number, while there were 77 which had to be kept under observation. Only 5 cases of rickets were found and these were not sufficiently severe to need treatment.

(i) Heart disease and rheumatism.

The number of children suffering from organic heart disease totalled 143, and 101 had some functional disorder. 22 cases of rheumatism and 15 of chorea were reported.

(j) Tuberculosis.

The following table shows the cases coming under this heading :

	Requiring treatment.	*Observation.*
Pulmonary definite ...	6	4
Pulmonary suspicious ...	4	7
Glands, etc.	6	7
Other forms	4	1

(k) Other defects or diseases.

83 cases were found to require treatment and 55 needed observation only.

VI.—FOLLOWING-UP.

The various defects found in the course of routine examinations are notified to the parents at the time of inspection, and by a written intimation from the Medical Department within a few days. The necessity for treatment is pointed out, and the parents encouraged in every way to seek the advice of the family Doctor.

After a short interval, a report is received from the Head Teacher, and if no action has been taken by the parents, a Nurse calls at the home at least once and makes every effort to ensure that the School Medical Officer's advice has been followed. The procedure outlined above has in some cases to be repeated several times, but there is a growing tendency on the part of parents to take earlier action than used to be the case.

SCHOOL NURSES.

The work of the School Nurse is one of the most important parts of the Medical Service. Her time is divided between the clinics, the schools, and the homes of the children. The following summary gives some idea of the scope and nature of her duties :—

(1) Work in School Clinics.

In addition to the general inspection work, each clinic has several special departments in which a variety of specialized forms of treatment has to be carried out under the direction of the doctors in charge of the different branches. The special forms of treatment are used chiefly for chronic ailments of the skin, ear, and eye, and the cases dealt with can rarely be treated satisfactorily at home.

(2) Work in Schools.

Some days before the Doctor's visit, children due for examination are weighed, measured and tested as to visual acuity. In this way a definite saving of time is effected, and the Doctor is enabled to devote more time to the individual child. 799 visits were paid to schools in connection with these duties last year.

With regard to verminous conditions, skin diseases and general neglect, in the course of 1,430 visits to schools 130,524 examinations of children were made including 11,538 re-examinations of children found to require attention on a previous occasion.

In this work the Nurse and Head Teacher act in close cooperation, and we are greatly indebted to the Teachers for their valuable assistance in this matter.

(3) Home-visiting.

In many cases, the parents do not accompany their children to clinic or medical inspection, and large numbers of visits have to be made at the homes for the purpose of interviewing them. Every effort is made in this way to encourage and assist them in obtaining treatment for ailments discovered in their children. During the year, the number of visits was 14,305.

VII.—TREATMENT.

Five Clinics, the Central, St. George, Bedminster, West Bristol and North Bristol, serve the schools in their respective areas, and have been in full working during the year. Each clinic has an Assistant School Medical Officer in charge, and is also visited by certain Specialists who attend at regular intervals.

At the Central Clinic, in addition to the provision of general treatment for the schools in the surrounding area, X-ray treatment and the bathing of scabies cases is carried out for the entire City.

The St. George, Bedminster, West Bristol and North Bristol Clinics are general treatment and dental clinics for their respective districts.

Clinic work is going on all day, including Saturday mornings in the Central, Bedminster and St. George districts. At the West Bristol and North Bristol Clinics, a general inspection clinic is held on two afternoons weekly, and treatment is carried out every morning session.

All the clinics have now been equipped for refraction work and cases are examined and glasses prescribed by the School Medical Officers.

The Committee's Aural Surgeon has charge of the ear, nose and throat cases and attends four clinics. Zinc ionisation for the treatment of chronic middle ear disease is carried out under his supervision at the Central Clinic.

The Orthopaedic Clinic is situated at Redcross Street School and deals with cases from the whole City, including children under five.

Cases of acute rheumatic infection in any form and also of non-rheumatic heart disease attend the clinic which has been established in the University Centre of Cardiac Research at Bristol General Hospital.

Tubercular children attend the Municipal Tuberculosis Dispensaries.

The total number of attendances at clinics during the year was 172,219.

(a) Malnutrition.

128 cases of malnutrition were treated at the clinics during the year. The treatment consists chiefly of provision of accessory foods, such as cod-liver oil and malt, etc., though many of these children are transferred to open-air schools.

(b) Uncleanliness.

Severe cases requiring treatment at the clinic are comparatively rare, and it usually suffices to send instructions to the parent as to method of cleansing.

(c) Skin Clinics.

(1) *Scalp Ringworm.* 57 cases of scalp ringworm were dealt with during the year. Of these, 45 were new cases, and 12 cases were carried over from 1932. Of the above, 56 were treated at the Committee's clinics and 1 otherwise.

X-ray treatment.

Dr. F. Gower Bergin, who is in charge of this Department, reports as follows :—

" Ringworm of the scalp seems to have been almost cleared out of the City Schools.

During the year, increasingly few cases came up for treatment by X-rays, and at the end of the year there were only 7 cases on the books.

During the first 3 months of this year 1934, only 3 cases have been sent for treatment at the Clinic.

This is a most gratifying result. When the work first started we were doing three and four cases a week and frequently more.

Now they average about 1 a month. This is an eloquent testimony to the value of X-ray treatment for ringworm.

From time to time cases are done for outside Authorities, but to all intents and purposes it is stamped out of Bristol schools."

The following table shows the number of cases on the books on 1st January in :—

1924	120
1927	30
1930	16
1933	12
1934	7

(2) *Body Ringworm.* During 1933 there were 140 cases of this disease under observation, of which 7 were carried over from the previous year. Of these, 139 were treated at the school clinics, and one privately.

(3) *Impetigo.* The school clinics treated 2,535 cases of impetigo during the year, a rapid cure being effected in all cases.

(4) *Scabies.* The bathing of children suffering from itch was carried out during the year at the Central Clinic on the lines described in previous reports. 76 cases were treated, 144 baths being given. The number of children excluded from school suffering from this complaint was 122.

Minor Ailments.

A very large number of miscellaneous cases was treated at the School Clinics. These include various surgical dressings of a minor character, and also various ailments that do not come under any of the above headings.

(d) Eye Clinics.

Mr. R. R. Garden, M.B., D.O.M.S. (Lond.), the Committee's Ophthalmic Surgeon, reports as follows :

" With the few exceptions in which parents make their own arrangements, all cases of defective sight detected in the course of School Medical work are referred for investigation to the Eye Clinic nearest to their homes, and a considerable saving of school and parents' time is thereby effected.

During 1933, a total of 3,086 cases was completed at the Eye Clinics, while 18 were tested and glasses ordered by opticians. In 391 cases, spectacles were not required, but a number of these have been kept under observation at school, and summoned for re-examination at intervals of from three to twelve months.

At each refraction session, a member of the optician's staff attends for the purpose of fitting spectacles, adjusting frames and obtaining signatures to agreements for payments. This arrangement has proved a great convenience as the parents are saved the time and expense of a journey to the optician's premises, and one can be certain that the glasses are ordered without delay. Last year spectacles were ordered for 2,022 children, and it is satisfactory to report that in all cases the glasses were obtained.

Special attention is paid to myopic children, all of whom are examined at least once a year. Every opportunity is taken to interest parents in safeguarding their children's eyesight, by advice at the time of the examination, or in certain cases by the distribution of leaflets on the subject of myopia.

Squint is detected and treated in as early a stage as possible, and thanks to the co-operation of the Infant Welfare Department many cases occuring in children under school age are sent up for advice. A total of 199 new squint cases and of 274 seen in previous years, but still under observation or treatment, attended the clinics during 1933. Of the new cases, 110 were under school age, and were mostly referred by the Infant Welfare Department.

As in previous years, the Assistant Medical Officers have been given opportunities of working in the Eye Clinics, and those with special experience have assisted greatly by undertaking a considerable share in the refraction and other work of the department.

The treatment of external eye diseases is carried out at the clinics, and last year the total of attendances made by these cases was 7,823."

Provision of Spectacles.

The glasses are supplied at a contract price by the Committee's opticians. When the parents cannot pay the amount due at once, arrangements are made for instalments which are collected by the Attendance Officers.

Spectacles obtained through School Medical Officer ...	911
Purchased privately by parents	1,095
Supplied by Public Assistance Committee ...	16
	2,022

In addition to the above, 443 minor repairs were undertaken.

In necessitous cases, the cost is partly or wholly remitted at the discretion of the Committee, after inquiry into the circumstances.

(e) Defects of Nose and Throat.

The number of children found suffering from the above ailments was 2,295, of which 943 received treatment. Operative treatment of enlarged tonsils and adenoids is performed at the various City Hospitals, 486 cases being so treated.

(f) Aural Clinics.

Regular visits are paid to four clinics by the Aural Surgeon, who makes a complete investigation in each case. Almost invariably, a parent attends with the child, and any abnormal condition discovered is explained at the time. When operative treatment is required, printed instructions are given with information as to the days and times when this can be arranged at one of the voluntary institutions.

Practically all cases of chronic ear disease are now treated at the Committee's clinics. Satisfactory attention can rarely be given at home, and for the treatment of ailments such as these the school clinic is admirably suited. The Central Clinic is equipped with two batteries for zinc ionisation of cases with middle ear suppuration.

Mr. Gordon R. Scarff, F.R.C.S. (E.), the Aural Surgeon, reports as follows :—

" During the past year the number of children attending the clinic was 1,121, of whom 707 were suffering from middle ear disease and 414 from other diseases of the ear, nose and throat. The 707 cases of middle ear disease included 676 cases of middle ear suppuration, of whom 122 were still attending for treatment at the end of the year. In a considerable number of these cases there was a focus of infection in the nose or throat, and such cases were referred to Hospitals for appropriate treatment. I would again stress the importance of early eradiction of such infective foci before secondary infection in the middle ear has become established.

Treatment is being continued on the same lines as before, that is, dry treatment by iodised boracic powder, with the exception of 77 of the more chronic cases which have been treated at the Central Clinic by weekly zinc ionisation. 406 such treatments have been carried out, and 32 patients have been discharged with dry ears and healed tympanic membranes."

(g) Dental Clinics.

There are four whole-time dentists at the Central, Bedminster, St. George and West Bristol Clinics, while at North Bristol, Mr. Hazell, who is appointed jointly by the Health and Education Committees, devotes seven sessions a week to the inspection and treatment of children in that district.

Mr. W. H. B. Stride, L.D.S., Supervisory Dental Surgeon, reports as follows :—

" Children are examined at the age when the permanent teeth begin to appear and an endeavour is made to re-inspect each child annually as recommended by the Board.

From the figures given below, it is obviously impossible for the present staff to carry out the amount of dental treatment necessary for an elementary school population of over 50,000. In 1933, only 32,000 routine cases received Inspection and Re-inspection and out of these, 10,660 received treatment. Another difficulty we have to contend with is the lack of convenient clinics in the more distant areas.

Although the School Dental Service was commenced as far back as 1919, when the rate of acceptance was about 45%, the rate has only gone up a small percentage in the last fifteen years.

Assuming that with such a low consent rate each dentist could deal with 5,000 children annually, this would mean that the present staff would need to be doubled ; and when in the future with an adequate staff we should feel justified in adopting propaganda to raise the rate of acceptance, further additions would then have to be made.

A far more intelligent point of view on the part of the parents has been observed with regard to conservative treatment ; and it is now much easier to obtain their consent to fillings in the permanent teeth than in the past. Numerous cases occur where " casuals " are brought to the clinics with requests for fillings, chiefly of course of the front teeth.

The treatment of " casuals " is an ever present difficulty and our present efforts to cut down these cases to the bare minimum, to enable us to carry out our routine work, is resulting in the voluntary hospitals' dental departments being often flooded out with school children with acute conditions. The necessity of the work is brought home to us when we find how difficult it is for many parents to obtain satisfactory dental treatment for their children when they endeavour to obtain it privately.

It will be noted that an ever increasing number of sessions devoted to Maternity and Child Welfare work must of necessity result in a reduction of time available for the treatment of school children so long as the numerical strength of the staff remains as at present. In 1929, the number of sessions given to this work was 103, whilst in 1933 this figure had risen to 226."

The following Table gives details of the work done by the whole-time dentists during the year :—

No. of children inspected			33,838
No. of children referred for treatment			27,254
No. of children actually treated			10,660
No. of teeth extracted	Permanent ...	4,109	23,283
	Temporary ...	19,174	
No. of teeth filled ...	Permanent ...	6,065	6,227
	Temporary ...	162	
No. of anaesthetics (local)			5,750
No. of anaesthetics (general)			5,980
No. of other operations			818
No. of attendances for treatment			20,821

The dental treatment of mothers and young children under the joint scheme of the Education Committee and the Maternity and Child Welfare Committee was carried on throughout the year, and particulars of the work done are given below :—

	Mothers.	*Young Children.*
No. summoned ...	279	1,007
No. attended	230	820
No. inspected	230	820
No. treated	219	752
No. of attendances ...	678	1,947

The above work occupied 226 sessions of the Dental Surgeon's time, and 2,625 attendances were made. In 152 cases, mothers were fitted with dentures on the recommendation of the Dental Surgeons.

(h) Orthopaedic and Postural Defects.

The provision of treatment for cases of surgical tuberculosis in school children is the responsibility of the Health Committee, and accommodation is available at Frenchay Park Sanatorium for those requiring in-patient treatment. In regard to children with other crippling ailments such as infantile paralysis, congenital defects and heart disease there is accommodation for 68 cases at Winford Hospital School.

The Education Committee's Orthopaedic Clinic is situated in Redcross Street School, and the staff is kept very busy in treating the large number of cripples attending the school, children from elementary schools, and also cases under school age, the latter being mostly sent on from the various infant welfare clinics of the city.

The nurse in attendance is qualified in Massage and Medical Electricity, and is assisted by two masseuses, who in addition hold certificates for Remedial Exercises. The Clinic is equipped with the most up-to-date electrical and gymnastic apparatus for orthopaedic work, and practically any form of specialized treatment ordered by the Surgeon can be given on the premises.

Mr. Hubert Chitty, M.S., F.R.C.S., is the Orthopaedic Surgeon in charge of this centre, and his report is as follows :—

" The amount of work carried out at the Orthopaedic Clinic continues to increase year by year and the limited accommodation at Red Cross Street is severely taxed.

Orthopaedic work is preventive as well as curative and the results obtained since the inception of the clinic have been most encouraging.

It is much to be hoped that more adequate quarters may soon be available in order that further expansion may not be prevented by lack of space."

The following Table shows the various ailments found amongst the patients seen :—

	Age 5 and over.	*Under age 5*
Paralysis : (*a*) Flaccid	97	14
(*b*) Spastic	40	9
Tuberculosis of Bones and Joints...	24	—
Congenital abnormalities of Bones and Joints	48	3
Amputations	5	—
Rickets	17	30
Various (flat-foot, spinal curvature, etc.)	273	25
	504	81

In addition to the above, 970 re-examinations were made during the twelve months.

The operations performed at Winford or one of the City Hospitals were as follows :—

Osteotomy	25
Tenotomy	6
Tendon slinging	5
Arthrodesis	3
For tuberculous abscess	6
For hammer toes	2
For torticollis	3
For rickets	5
Wrenching and plaster	5
For Scoliosis	9
Cleft Palate	1
For Removal of Exostosis	1
Cervical Rib	1
Umbilical Polypus	1
Coffey's Operation	1

The provision and maintenance of surgical boots and appliances is a most important matter at a clinic of this kind, and during the year 418 recommendations were dealt with through the agency of the School Medical Officer. Part of the cost is borne by the parent, part by the Bristol Crippled Children's Society and other charitable sources, the deficit being made up by the Education Committee.

(i) Heart Disease and Rheumatism.

Dr. C. Bruce Perry reports :—

" The work of the heart clinic at the University Centre of Cardiac Research at the Bristol General Hospital has continued on the same lines as in previous years. All children with a history of heart trouble or in whom suspicious signs are found by the School Medical Officers are referred to the clinic for further examination. A certain number of children are also referred by general practitioners for advice as to fitness for school. The diagnosis arrived at as a result of the examination at the clinic is reported to the school medical officers together with a recommendation as to the form of treatment required. Children requiring treatment at home are advised to consult their own doctor or to obtain treatment at one of the Institutions, according to their financial ability. A copy of this report is sent to the patient's family doctor, which greatly enhances the value of the clinic by making for more complete co-operation in the care of those children requiring treatment. Thanks to the increased accommodation made available for heart cases at Winford Orthopaedic Hospital, more of these children are able to receive the best treatment for their condition, and it is hoped that in the coming year we shall be able to accommodate the majority of cases requiring active treatment. The difficulty of providing suitable employment for the cardiac cripple mentioned last year, unfortunately is still as great as ever. However, it is hoped that something may be effected to improve this next year by a sub-committee of Winford Orthopaedic Hospital and the Bristol Crippled Children's Society, which is activated by the firm belief that for every cripple there is some work which he or she can perform as efficiently as a sound person. Many of the heart cases are perfectly fit for work in factories, but are debarred from this by the stringent medical examination imposed by the employers. The result is that unless great care is exercised they drift into more easily obtained laborious work.

The value of the clinic in preventing the unnecessary restriction of those children suspected of heart disease, is shown by the fact that of the 234 new children examined during the year, 100 were found to have no organic heart disease, of whom 93 needed no treatment or restriction. The clinic is also useful in the opportunity it provides for clinical research. The following papers have been published during the past year :

> " The Value of Salicylates in the Prevention of Rheumatic Relapses, by C. Bruce Perry. *The Lancet,* 22nd April, 1933, p. 861."
>
> " Thrombo-Phlebitis in Acute Rheumatism, by C. Bruce Perry, with Clinical Case Notes by O. C. M. Davis. *The Lancet,* 28th October, 1933, p. 966."

During 1933, 234 new cases have attended the Cardiac Clinic, and 1,064 re-examinations have been made, making the total number of attendances 1,298. The following Table shows how the cases have been dealt with :—

SUMMARY OF CASES ATTENDING CARDIO-RHEUMATIC CLINIC.

	No treatment or restriction.	No treatment, but restriction of games.	Treatment, and attend school.	Treatment, and exclude from school.	Institutional treatment.	TOTAL.
NEW CASES.						
Rheumatic Heart Disease	18	31	18	15	28	110
No Organic Disease	93	—	2	3	2	100
Congenital Heart Disease	18	—	—	2	—	20
Doubtful	—	2	—	—	2	4
	129	33	20	20	32	234
RE-EXAMINATIONS.						
Rheumatic Heart Disease	395	225	72	33	15	740
No Organic Disease	178	—	1	—	—	179
Congenital	109	11	3	7	1	131
Various	10	3	1	—	—	14
	692	239	77	40	16	1,064

No. of individual children examined	961
No. of new cases for 1933	234
No. of re-examinations	1,064
Total No. of attendances	1,298

(j) Tuberculosis.

A total of 863 children was examined by the Tuberculosis Officer, of which 505 were old cases and 358 new. Of the latter, 44 were classified as definite pulmonary tuberculosis, 50 as cases of non-pulmonary tuberculosis, 8 as suspected tuberculosis, and 256 as non-tubercular.

During the year, 145 children were discharged from sanatoria under the Health Committee's scheme after an average period of 148 days' treatment.

The number of attendances of children at the Tuberculosis Dispensaries was 3,369.

Co-operation between the Officers of different departments is encouraged and found to be invaluable to all concerned.

(k) Artificial Sunlight Clinic.

Dr. Marguerite Hughes, Chief Assistant to the Maternity and Child Welfare Department, who is in charge of this clinic, reports as follows :—

During 1933, 15 children of school age were given artificial sunlight treatment. Full details of the cases are given below :—

Group A. Debility following illness.

1.	Number of cases treated ...	7.
2.	Type of lamp used	Quartz Mercury Vapour.
	(*a*) Period of treatment ...	2 Courses extending over 6 months.
	(*b*) Number of Doses ...	12 doses.
	(*c*) Strength of Dose ...	Gradually increasing 1 minute to 12 minutes.
3.	Statement as to other forms of treatment	Tonics.
4.	Statement of progress as regards general health.	General condition improved considerably in 5 cases. One child failed to attend regularly. There was little improvement. Sixth child attended regularly, but there was no improvement, and she was finally sent for Sanatorium treatment. Average gain in weight, 2 lbs. in 6 months.
5.	Statement of progress as regards special symptoms.	General health, vitality, appetite, and sleep improved.

6.	Any unfavourable symptoms ...	Loss of weight in one case, but attendance was irregular.
7.	General conclusion as to effect of treatment.	General effect of ultra violet light on debilitated children is very beneficial.

Group B. Cervical Adenitis.

1.	Number of cases treated ...	2.
2.	Type of Lamp used	Quartz Mercury Vapour.
	(*a*) Period of treatment ...	2 Courses—6 months.
	(*b*) No. of doses	12 doses.
	(*c*) Strength of dose... ...	1 minute to 12 minutes.
3.	Statement as to other forms of treatment.	Dental extraction and tonics.
4.	Statement of progress as regards general health.	General health improved. Local condition improved.
5.	Statement of progress as regards special symptoms.	Do. Do.
6.	Any unfavourable symptoms	None.
7.	General conclusion as to effect of treatment.	Insufficient number of cases on which to base conclusions.

Group C. Anaemia.

1.	Number of cases treated ...	2.
2.	Type of lamp used	Mercury Vapour.
	(*a*) Period of treatment ...	2 Courses—6 months.
	(*b*) Number of doses ...	12.
	(*c*) Strength of dose ...	1 to 12 minutes.
3.	Statement as to other forms of treatment.	Tonics.
4.	Statement of progress as regards general health.	One child improved considerably in general condition. The other child improved slightly, but did not complete the second course.
5.	Statement of progress as regards special symptoms ...	None.
6.	Any unfavourable symptoms	None.
7.	General conclusion as to effect of treatment.	Insufficient number upon which to base conclusions.

Group D. Bronchitis and Asthma.

1.	Number of cases treated ...	2.
2.	Type of Lamp used	Mercury Vapour Lamp.
	(*a*) Period of treatment ...	2 Courses—6 months.
	(*b*) Number of doses ...	12 doses.
	(*c*) Strength of dose... ...	1—12 minutes.

3. Statement as to other forms of treatment.	Treatment by private doctor in one case.
4. Statement of progress as regards general health.	General condition remained good in both cases, and both showed increase in weight.
5. Statement of progress as regards special symptoms.	Attacks of bronchitis diminished in both cases.
6. Any unfavourable symptoms	None.
7. General conclusion as to effect of treatment.	Number insufficient.

Remaining Cases—both chronic malnutrition—
both showing signs of old Rickets.

1. Number of cases treated ...	2.
2. Type of Lamp used ...	Mercury Vapour Lamp.
(*a*) Period of treatment ...	2 Courses—6 months.
(*b*) Number of doses ...	12 doses.
(*c*) Strength of dose ...	1 to 12 minutes.
3. Statement as to other forms of treatment.	Tonics and Cod Liver Oil.
4. Statement of progress as regards general health.	Improvement in general condition, as regards sleep, appetite, general vitality, and gain in weight.
5. Statement of progress as regards special symptoms.	No change in bony manifestation of old rickets.
6. Any unfavourable symptoms	None.
7. General conclusion as to effect of treatment.	Number treated insufficient for any conclusion to be drawn.

(l) Clinic for " Difficult Children."

Dr. A. A. Dalby reports :—

" The Education Committee has been considering for some long time the possibility of establishing a " Child Guidance " Clinic, which would be recognised as such by the Child Guidance Council. Unfortunately, owing to the financial stringency, this has proved impossible up to the present moment, but the subject is only in abeyance pending an improvement in the economic situation.

The School Medical Staff has so many duties to perform that very little time has been available for the investigation of " difficult children " during the last year. However, 12 such children have been seen (5 boys and 7 girls), of whom 5 were referred for anti-social tendencies, 2 as educational failures, 4 for emotional instability, and 1 for thieving. The majority of these cases showed a marked improvement after an investigation had been made and certain lines of treatment suggested to the parent or guardian.

It should be noted that these 12 cases were all of rather an urgent nature, and that there is a very large number of cases of less marked " difficulty," the investigation of which would prove of great benefit to the children concerned."

(m) Medical Treatment of the Pre-School Child.

Children under five years of age may be examined and treated at School clinics when reported by the Maternity and Child Welfare Department.

Any cases of squint, adenoids, dental decay, or crippling defect, are notified direct to the School Medical Officer and the parents are then asked to bring these children to appropriate specialists for examination. Details of these cases are given in the reports in Section VII, pars. (d), (f), (g) and (h).

The Health Visitors are provided with cards by means of which cases of diseases of the eyes, ears, skin and minor ailments can be referred to the clinic for the district.

The following cases were dealt with in this way during the year :

Eye disease	24
Otorrhoea	87
Skin diseases	118
Minor ailments	57
Various	25
	311

VIII.—INFECTIOUS DISEASE.

The number of cases of diphtheria occurring in children of school age during the year was 370, a slight increase on 1932. The deaths from this disease were 14 as against 11 in the previous year.

During 1933, 1,647 school children received a full immunising course of inoculations against diphtheria. In May, a change was made in the type of toxoid used and this appears to have been successful in raising the percentage of cases giving a negative re-action to Schick test.

The complete figures for the year are as follows :—

Number received full course of immunising inoculations		1,647
Number Schick-tested after immunising course ...		970
Number of observations		931
Results—		
Negative	675	931
Faint positive	66	
Positive	190	
Percentage negatives, 1933		72.5
Percentage negatives 1932		40.0

The incidence of Scarlet Fever shews a small increase over that of 1932, 502 cases as against 438. It will be noticed that the cases were fairly evenly distributed through the four quarters.

The total number of non-notifiable diseases shows a very great increase on the previous year. This is accounted for by epidemics of measles and mumps, the number of notifications being 2,403 and 2,355 respectively. Measles was rife throughout the year but most markedly during the second quarter. Three deaths were attributed to this disease.

The following Table gives details of notifiable and non-notifiable infectious diseases for the year :—

A.—CASES OF NOTIFIABLE INFECTIOUS DISEASES AMONGST SCHOOL CHILDREN, WITH CONTACTS.

1933.	Cerebro-Spinal Fever.		Polio-encephalitis and Poliomyelitis.		Scarlet Fever.		Diphtheria.		Encephalitis Lethargica.	
	Cases	Contacts	Cases	Contacts	Cases	Contacts	Cases	Contacts	Cases	Contacts
1st Quarter	1	4	—	—	116	195	66	129	—	—
2nd Quarter	—	—	—	—	156	230	69	137	—	1
3rd Quarter	—	6	—	—	90	167	120	247	—	—
4th Quarter	—	—	—	—	140	171	115	221	1	2
	1	10	—	—	502	763	370	734	1	3

CASES OF NON-NOTIFIABLE INFECTIOUS DISEASES AMONGST SCHOOL CHILDREN.

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Totals.
Whooping Cough ..	175	117	92	153	537
Chicken Pox	279	270	78	136	763
Mumps	1,503	725	74	53	2,355
Measles	471	1,136	493	303	2,403
German Measles ..	5	16	2	7	30
	2,433	2,264	739	652	6,088

B.—1933.

Cause of Death (Ages 5-15).	
Scarlet Fever	3
Diphtheria and Croup	14
Influenza	5
Encephalitis Lethargica	—
Cerebro-spinal Fever	1
Tuberculosis of Respiratory System	6
Other Tuberculous Diseases	11
Cancer and Malignant Disease	—
Diabetes	1
Heart Disease	4
Pneumonia (all forms)	9
Rheumatic Fever	6
Appendicitis	4
Digestive Diseases	—
Congenital Debility and Malformation	1
Violent Deaths	11
Nephritis	3
Measles	3
Other Diseases	17
All Causes	99

IX.—OPEN AIR EDUCATION.

Except for the fact that most of our modern schools are built on open air lines—no special provision is made for open air education in public elementary schools.

X.—PHYSICAL INSTRUCTION.

The closest co-operation exists between the School Medical Officer and the Superintendents of Physical Instruction. Children unfit for games and exercises, or requiring modifications of these are notified to the Physical Instruction Department, and in the cases of spinal curvature, flat-foot, etc., occuring among students in Secondary Schools special remedial exercises are given.

Mr. L. F. W. Thompson, Chief Organiser of Physical Training, reports :—

" During the past year progress has been made in all branches of Physical Education and the interest taken in the subject has been considerably increased by the introduction of the Board of Education's eagerly anticipated revised syllabus of physical training. Whilst this syllabus has not been in use sufficiently long to analyse its merits or demerits, it is generally recognised that the changes made conform with modern thought and development. During the Spring Term a course for Women Teachers was held in anticipation of the new type of work, and this served not only to show the enthusiasm of the teachers for the modern methods but also the very great value of such courses. The posture of school children has been dealt with at length and it may not be out of place to mention that this aspect of our work deserves careful attention, not only in the actual physical training lesson but also during every lesson of the school curriculum.

In the re-organised Senior Schools the work has proceeded along the lines set out in the Board's Reference Book of Gymnastic Training for Boys and the supplement for older Girls, and it has been found that this type of work meets the needs of senior boys and girls satisfactorily. The introduction of portable apparatus into the physical training lesson has increased the interest of the children and provided an opportunity of developing team work and personal achievement to a considerable degree. To obtain the maximum benefit from physical exercises and games, suitable clothing is essential, and whilst progress has been made in this direction there is still room for improvement.

During the Bristol-Brighton Week in June, the schools gave a Demonstration of Physical Training, including mass work and games by the seniors and Maypole dancing and games by the infants.

There has been steady progress in school games ; football and cricket leagues have flourished and there has been a noticeable increase in the number of schools affiliated to the Girls' Games Association.

In swimming, a certificate was offered for the first time to children who could swim a mile. The following awards were obtained :

Corporation Certificates (100 yards)	3,145
One Mile Certificates	1,356
Number of children taught to swim	3,044
Life Saving Awards	1,157

XI.—PROVISION OF MEALS.

During the year, 237,035 free dinners have been granted as compared with 175,510 in 1932. In addition, 42,359 free milk meals were given.

Milk in Schools.

The scheme for the supply of milk on a voluntary basis in infants' schools has proved equally popular this year as last. At present about 9,600 children are receiving milk daily.

The provision of free milk to necessitous children has been extended, by permission of the Board of Education, to include other schools in the poorest parts of the City. The supply to these children is granted on the recommendation of the School Medical Officer.

XII.—CO-OPERATION OF PARENTS.

Some days before a routine medical inspection in school, written notification is sent to the parents requesting their attendance at the examination, and during the year the number present at routine inspections was 11,692. The following is an analysis of these attendances :—

Code Groups.	No. of Children Examined.	No. of Parents present.	Percentage
Entrants ...	4,863	4,524	93.03
Intermediates	4,998	3,978	79.59
Leavers ...	5,069	3,190	62.93
	14,930	11,692	78.31

At the clinics, when any special examination is required (*e.g.* for eye, ear and orthopaedic cases) the parent almost invariably accompanies the child.

The increasing interest amongst the parents in regard to matters of hygiene is maintained, and on the whole they co-operate readily with the School Medical Department in any efforts to improve the health of the children.

Co-operation of Teachers.

It is again our very pleasant duty to express our gratitude to the Bristol teachers for the invaluable and ungrudging help given to us during the year. As our work increases we realize more and more to what extent the efficiency of our service depends on this assistance.

Co-operation of School Attendance Officers.

A close relationship exists between the School Medical and School Attendance Departments. The Superintendent Attendance

Officer and his staff provide reports on a large number of children, and assist greatly in securing the attendance of absentees for examination at clinics. By their visits to homes, they obtain information in regard to environment and other factors which may affect the health of children, and this is often of great assistance to us in dealing with difficult cases. A number of parents who refuse to obtain treatment for their children are visited and action is taken in cases of neglect and cruelty.

The Attendance Officers also help by collecting the small weekly instalments by which the majority of parents prefer to pay for spectacles and surgical appliances supplied to their children. This means a great deal of home visiting and a considerable amount of clerical work.

Co-operation of Voluntary Bodies.

The Winford Orthopaedic Hospital incorporating the Bristol Crippled Children's Society, assisted in dealing with a large number of crippled cases during the year : 88 were sent to this hospital for prolonged periods, 17 to other hospitals at the seaside or in the country, 57 to convalescent homes, and 17 to farms ; while 428 cases were assisted in the provision of surgical appliances. In regard to the latter, the Education Committee make up any deficit that may arise in the case of children attending the Redcross Street Cripple School, and of elementary school children for whom the Committee's Orthopaedic Surgeon has ordered apparatus.

In connection with this hospital, the After-Care Committee, of which Dr. Dalby, Miss Elkins and Mr. Gregory are members, meets at regular intervals to consider means of assisting patients after their discharge from Winford, or Red Cross Street School.

Cases where definite cruelty is discovered are reported to the National Society for the Prevention of Cruelty to Children, and the parents cautioned, or prosecuted by their Inspectors. The good work done by this Society is very much appreciated by the department.

XIII —BLIND, DEAF, DEFECTIVE AND EPILEPTIC CHILDREN.

The methods of ascertainment and classification of these cases have been described in previous reports. At the present time three of the Medical Officers in the department are recognised by the Board of Education for the purpose of Section 55, Education Act, 1921, and Section 31, Mental Deficiency Act, 1913.

(a) Feeble-minded Children.

The Committee maintains two schools for feeble-minded children :—Redcross Street School which accommodates 199, and Orchard Place School which accommodates 88. The total number in the two schools at the end of the year was 270.

The figures are set out below :—

	Redcross Street.	*Orchard Place.*	*Total.*
No. admitted during 1933 ...	57	27	84
No. discharged	49	18	67
No. on register at end of year	194	76	270

In addition the Committee maintains four boys at Besford Court and one girl at Allerton Priory.

The number of retarded children referred by Head Teachers and investigated during the year was 170. In addition, 31 children attending Special Schools were examined at the request of their parents, who made application for them to leave school before attaining the age of sixteen.

A systematic re-examination of the children attending these schools was carried out during the year.

Reports on the mental capacity of fifty children admitted to the care of the Public Assistance Committee, were furnished.

(b) Physically Defective Children.

At Redcross Street School, the recognised accommodation for physically defective children is 140. The cases admitted include disease of bones, joints, and general nervous system, with, in addition, a number of " cardiac cripples " having congenital or rheumatic heart disease.

The children are conveyed to and from Redcross Street School in special ambulances, and the majority of the scholars have their mid-day meal in school.

Mr. Chitty, the Orthopaedic Surgeon, visits the school twice weekly to examine children and to advise as to treatment, which is carried out in the Orthopaedic Clinic attached to the School.

In addition to cases reported by the School Medical Department, a considerable number of children under school age are referred to this clinic by the Maternity and Child Welfare

Department. In this way, children with crippling defects are treated during the earliest stages of the disease.

The Nurse in attendance carries out a large amount of massage and electrical treatment, and also all the necessary work in connection with the treatment of eye, ear, skin and minor ailments for both departments of the school. The total number of attendances made for treatment last year was 19,761, of which, 7,375 were for orthopaedic treatment and 12,386 for the other ailments mentioned.

Surgical boots and appliances are obtained for the children on the advice of the School Medical Officer, and a large number of repairs to apparatus are made every year through the same agency.

During the year the following admissions and discharges were made :—

No. of admissions	31
No. of discharges	47
No. on register at end of year	117*

* Including one boy from another authority.

The following table shows the different ailments from which the children are suffering :—

	Boys.	*Girls.*	*Total.*
Paralysis : (*a*) Flaccid	26	17	43
(*b*) Spastic	7	7	14
Tuberculosis : Bones and Joints	9	3	12
Congenital abnormalities of bones and joints	2	—	2
Amputations	1	—	1
Spinal curvature (non-tubercular)	4	5	9
Rickets	1	3	4
Heart Disease and Chorea ...	5	6	11
Muscular Atrophy	1	—	1
Talipes	7	4	11
Encephalitis	1	—	1
Cut Tendon	1	—	1
Spina Bifida	1	—	1
Dislocated Hip	1	2	3
Arthritis	1	—	1
Haemophilia	1	—	1
General Debility, etc.	1	—	1
	70	47	117

(c) Delicate Children.

(1) *Knowle Open Air School.* The delicate and convalescent children who attend this school are recommended by the medical staff of the Corporation, and by doctors at the Bristol Hospitals or in private practice. One of the School Medical Officers visits the school every week to examine special cases and ensure that each child is inspected at least once every six months. A nurse is in attendance all day for the purpose of treating minor ailments, supervising meals, etc. One afternoon a week is devoted to home visits.

Dental treatment is carried out by one of the Committee's dentists.

During 1933 the figures for the School were as follows :—

No. of admissions	41
No. of re-admissions	8
No. discharged fit for work	4
No. discharged fit for ordinary school ...	54
No. discharged for other reasons	4
	62
No. on registers at end of 1933	119
Average attendance	105.9

(2) *Park Classes.* In St. George, Eastville and Bedminster Parks, classes for delicate children are held in the bandstands all the year round. The classes are conducted on similar lines to those of Knowle Open Air School, and have the advantage of being near to the homes of the children.

	Bedminster.	*Eastville.*	*St. George.*
No. on the registers at the end of 1933	25	23	25
Average attendance for the year ...	22	23	20.8

(d) Deaf Mute Children.

It was decided to close the Residential School for Deaf Children at the end of the Easter Term owing to the fact that practically all the boarders were children from outside authorities. To meet the needs of the Bristol cases the Moorfields Special School was moved to buildings having greater accommodation and the children were transferred there.

Moorfields Special School now has room for 125 children, of whom 75 have progressive short sight or seriously damaged vision, 29 are partially deaf and 26 totally deaf.

Although these children are in the same building and under the same Head Teacher, the three different groups are, of course, kept quite separate both educationally and socially.

Deaf Mute Children transferred from Residential School	29
No. discharged during 1933	3
No. on register at end of 1933	26

Of this total 3 boys and 3 girls come from other Authorities. In addition 2 boys are maintained at the Institution for Deaf and Dumb Children, Exeter.

(e) Myopic Children.

In the Myopic Department, the children have defects of the eye or vision which make teaching by ordinary methods undesirable. At the same time, they are not cases which require attendance at a Blind School, and are not likely to take up occupations generally selected by the blind. The whole curriculum is therefore designed to prevent eye strain, the teaching is mainly oral, and every effort is made to train the children to avoid overuse of the eyes. All cases are under careful and regular supervision by the ophthalmic consultant.

No. admitted during 1933	17
No. discharged	15
No. on register at end of year	72

Of this total, 3 boys and 1 girl come from another Education Authority.

(f) Partially Deaf Children.

In the Partially Deaf Department, the children are too deaf to benefit from the instruction given at ordinary school. They still retain sufficient hearing, however, to keep them from degenerating into the deaf-mute condition, and every effort is made to retain the speaking voice by means of speech exercises and lip-reading.

In the early part of the year a " Multiphone " was purchased. This instrument enables semi-deaf children to hear the tones of the teacher's voice, which, normally they never do. The improvement in the speaking voices is most marked whilst the children are using the apparatus and this " lesson " has become almost the most popular one in the school.

No. admitted during 1933	6
No. discharged	3
No. on register at end of year	29

Of this total, 3 boys and 1 girl come from other Authorities.

(g) Blind Children.

Twenty-one blind children are maintained by the Education Committee at the following school :—

Westbury Blind Asylum ... 21 (16 boys, 5 girls).

In addition, one girl is maintained at North Wales School for Blind Children, Rhyl, and one boy at the Roman Catholic Blind School, Liverpool.

XIV.—FULL-TIME COURSES OF HIGHER EDUCATION FOR BLIND, DEAF, DEFECTIVE AND EPILEPTIC STUDENTS.

Provision is made at the Royal School of Industry for the Blind, Westbury-on-Trym, for Higher Education blind cases. Most of the young people concerned were in the school before reaching the age of 16. The number being maintained at the school by the Local Education Authority at the end of 1933 was 11. In addition, two were being paid for at the Catholic Blind School, Liverpool.

Payment has also been made by the Authority towards the maintenance of nine adult trainees during their period of training at the Blind Workshops. As soon as their period of training is completed, they are employed as paid workers in the workshops and the financial liability is then undertaken by the Blind Persons Act Committee.

No contribution is being made at the present time towards the Higher Education of any deaf, defective or epileptic young persons, no request having been made to the Education Committee.

XV—NURSERY SCHOOL AND CLASSES.

No additional accommodation for pre-school children has been provided since the last report.

At the Castle Green Nursery Class a room has been equipped as a small clinic for the treatment of minor ailments. This became necessary owing to the impossibility of ensuring attendance at the ordinary school clinic.

The number of children on the registers at the end of 1933, was as follows :—

	No. on registers
St. Werburgh's Nursery School	115
Castle Green Nursery Class	52

The scheme of medical inspection in these schools is for every child to be given a routine examination at intervals of six months, unless the infant's condition necessitates it being seen more frequently. The number of inspections made during the year was 287 at St. Werburgh's and 140 at Castle Green.

Cases for action are shown in the Table below :—

	St. Werburgh's.	*Castle Green.*
Eye disease	2	3
Squint	8	5
Otitis media	7	5
Other ear disease	—	1
Enlarged tonsils	1	1
Adenoids	6	—
Tonsils and adenoids	6	2
Other nose and throat conditions	5	4
Teeth	23	11
Rickets	—	2
Deformities	2	—

In addition, 4 children were recommended courses of ultra violet ray treatment.

A considerable number of children not requiring immediate treatment is kept under constant observation.

As formerly, Dr. M. G. Hughes, Chief Assistant, Maternity and Child Welfare Department, has been responsible for the medical inspection, whilst the Health Visitors for the respective districts attend daily to treat minor ailments, etc.

XVI.—SECONDARY SCHOOLS.

There are twelve non-Municipal and four Municipal Secondary Schools, with one Junior Technical School, in the city.

(1) Medical Inspection.

Medical inspection is only carried out in the Municipal Secondary Schools and the Junior Technical School. These schools with their accommodation and average attendance are :—

Secondary—	*Accommodation.*	*Average Attendance.*
Cotham (Boys)	600	544
Fairfield (Boys and Girls) ...	480	464
St. George (Boys and Girls)...	470	448
Merrywood (Boys and Girls)	280	261
	1,830	1,717
Technical—		
Temple Junior Technical ...	100	98

All children obtaining special places in Secondary Schools are required to pass a medical examination prior to admission, and the number so examined in 1933 was 281.

All the pupils of these schools, irrespective of whether they are free-place students or otherwise, are subjected to an annual medical inspection. In the case of girls, Dr. Monica A. O'Donohoe carries out the examination.

Parents are invited to attend but the response is not nearly so good as in the case of elementary schools.

The number of children examined in a routine way during 1933 was 1,712, including Junior Technical pupils.

The system of following-up defects is the same as that for elementary school children.

(2) Medical Treatment.

Any physical defects found are notified to the parents, who usually make arrangements with the family doctor for treatment, except in the case of defects which require prolonged or specialized treatment. For instance, ailments of the eye, ear, nose and throat are usually attended to at one of the school clinics. Spectacles are as a rule, provided through the School Medical Department, on the prescriptions of the Committee's Oculists.

Where remedial exercises are advisable for the rectifying of spinal curvature, flat-foot, etc., a report is sent to the Superintendent of Physical Instruction, under whose direction appropriate exercises are given in school. In a few cases the treatment is given at the Orthopaedic Clinic by one of the Remedial Gymnasts.

No differentiation is made between "special place" or fee-paying pupils who wish to avail themselves of treatment under the Authority's scheme. Whilst no charge is made for treatment at the school clinics, voluntary contributions are invited from those seeking dental treatment.

XVII.—PARENTS' PAYMENTS.

No charge is made to parents for treatment of either elementary or secondary school children but they are invited to make voluntary contributions.

The cost of spectacles and surgical boots is recovered from the parents by instalments which are collected by the Attendance Officers. The Education Committee, however, in necessitous cases may remit part or whole of the cost.

Cost of Spectacles	£241	15	9
Amount recovered	£215	8	8
Cost of Surgical appliances	£116	18	2
Amount recovered	£72	18	9

XVIII.—HEALTH EDUCATION.

The Staff of the School Medical Service do not give any direct instruction in Health Education in schools. They have, however, given lectures on Medical and Dental Work to various " Parent-Teacher " Societies.

XIX.—SPECIAL ENQUIRIES.

No special enquiries have been undertaken during 1933.

XX.—MISCELLANEOUS.

The following report has been sent by Mr. C. K. Rossiter, Inspector to the Employment of Children Act, 1903, and the Education Act, 1921 :—

" The administration of the Employment of Children Act, 1903, Education Act, 1921, and Children and Young Persons Act, 1933, for the period from 1st January, 1933, to 31st December, 1933, is as follows :—

During the year there were 1,262 cases of infringement of the above Acts.

By Employers	646
,, Parents	540
,, Street Traders	30
Prosecutions, etc.	46

These were dealt with as follows :—

Warned	1189
Prosecuted	27
Employment Cards revoked	2
,, ,, refused	21
Street traders licences refused	8
Entertainments licences refused	8
,, for charitable objects refused	7

Registered Children.

During the year 468 children between 12 and 14 years of age were registered for employment in :—

	Boys.	*Girls.*
Delivery of newspapers	325	1
,, milk	19	—
Indoor domestic work	5	1
Errands	97	1
Delivery of Meat	15	–
,, Bread	2	–
,, Coal	2	–
	465	3

Children employed between 7.0 *a.m. and* 8.0 *a.m. on schooldays and for Saturdays and holidays.*

257 children were registered for employment between 7.0 a.m. and 8.0 a.m. as follows :—

Delivery of newspapers	249
,, milk	4
Indoor domestic work	4

Children employed between 8.0 *a.m. and* 10.0 *a.m. on Sundays.*

129 children were registered for employment between 8.0 a.m. on Sundays as follows :—

Delivery of newspapers	121
,, milk	6
Domestic work	1
Errands	1

The total number of children registered for employment between 4th April, 1921, and 31st December, 1933, was 7,509.

Young Persons.

Nine young persons (boys between the ages of 15 and 16 years) were granted licences to engage in Street Trading in the City in

Selling newspapers	7
,, greengrocery	1
,, onions	1

Entertainments.

56 children were licensed under the Prevention of Cruelty to Children Act, 1914, Education Act, 1921, Children and Young Persons Act, 1933, to take part in Public Entertainments.

Number of children licensed by Bristol Authority	48
Number of children licensed by other Authorities	8

52 visits were made to the theatres, apartments and schools to ascertain that the conditions and restrictions of these licences were complied with.

4,042 children were granted permission to take part in 256 entertainments given for charitable purposes. Halls and dressing-rooms were visited to ascertain that the general conditions under which these children were employed were satisfactory."

Fifty-one cases were notified under the Mental Deficiency Act to the Local Control Committee during the year, and were classified as follows :—

	Boys.	*Girls.*	*Total.*
(1). (i) Children incapable of receiving benefit or further benefit from instruction in a Special School :			
(*a*) Idiots	—	—	—
(*b*) Imbeciles	12	9	21
(ii) Children unable to be instructed in a Special School without detriment to the interest of other children :			
(*a*) Moral defectives	—	1	1
(*b*) Others	6	1	7
(2). Feeble-minded children notified on leaving a Special School on or before attaining the age of 16	10	11	21
(3). Feeble-minded children notified under Article 3, i.e., "special circumstances" cases	—	—	—
(4). Children who in addition to being mentally defective were blind or deaf ...	—	1	1
Grand Total ...	28	23	51

The following special medical examinations were made during the year :—

Candidates for " Special places " in Secondary Schools	281
Children examined under Employment of Children Act ...	468
Teacher Exhibitioners	12
Cases examined under the Superannuation Act on appointment to or discharge from the Corporation service	157

TABLE I. (SECONDARY).

Number of Children Inspected 1st January, 1933, to 31st December, 1933.

A.—Routine Medical Inspection.

Age	10	11	12	13	14	15	16	17	18	19	20	Grand Total
Boys	6	106	166	312	239	230	91	30	11	—	—	1,191
Girls	4	52	174	159	58	41	27	4	2	—	—	521
Totals	10	158	340	471	297	271	118	34	13	—	—	1,712

B.—Special Inspections.

Re-examinations (*i.e.*, No. of children re-examined) 183

TABLE II. Summary of Treatment of Defects.

Defect or Disease.	Number of Children Treated.		
	Under Local Education Authority's Scheme.	Otherwise.	Total.
Skin	2	1	3
Visual Defects	145	6	151
Nose and Throat	21	8	29
Eye Disease	—	1	1
Deformities	15	—	15
Miscellaneous	2	5	7
Total	185	21	206

TABLE III. (SECONDARY).

Return of Defects found in the Course of Medical Inspection in 1933.

Defect or Disease. 1	Routine Inspections.	
	Number referred for treatment. 2	Number requiring to be kept under observation, but not requiring treatment. 3
Malnutrition	—	3
Skin and Hair	3	1
Teeth	177	8
Nose and Throat	75	8
Glands	—	1
External Eye Disease	2	—
Vision	151	1
Colour Sense	—	—
Ear Disease	1	—
Hearing	—	—
Speech	—	—
Thorax	—	—
Heart and Circulation	8	6
Anaemia	—	1
Lungs	3	—
Nervous System—Headache	—	1
Overstrain	—	—
Indigestion	—	—
Constipation	—	—
Spinal Curvature	13	4
Flat Foot	14	3
Other Defect	9	1
Catamenia	—	—

Number of Children		Percentage of Children found to require Treatment.
Inspected.	Found to require Treatment.	
1,712	*175	10·2

* Excluding Uncleanliness and Dental Disease.

ELEMENTARY SCHOOLS.

TABLE I.—RETURN OF MEDICAL INSPECTIONS.

A. ROUTINE MEDICAL INSPECTIONS.

Number of Code Group Inspections	
Entrants	4,863
Second Age Group	4,998
Third Age Group	5,069
Total	14,930
Number of other Routine Inspections	58

B. OTHER INSPECTIONS.

Number of Special Inspections	23,846
Number of Re-inspections	25,442
Total	49,288

TABLE IIB.

B. NUMBER OF *individual children* FOUND AT *Routine* MEDICAL INSPECTION TO REQUIRE TREATMENT (EXCLUDING UNCLEANLINESS AND DENTAL DISEASES).

Group. (1)	Number of Children. Inspected. (2)	Number of Children. Found to require treatment. (3)	Percentage of Children found to require treatment. (4)
PRESCRIBED GROUPS :—			
Entrants	4,863	543	11·17
Second Age Group ..	4,998	731	14·63
Third Age Group	5,069	617	12·17
Total (prescribed groups) ..	14,930	1,891	12·67
Other routine inspections	58	10	17·24

TABLE IIA.

A. RETURN OF DEFECTS FOUND BY MEDICAL INSPECTION IN THE YEAR ENDED 31ST DECEMBER 1933.

Defect or Disease. (1)		Routine Inspections.		Special Inspections.	
		No. of Defects.		No. of Defects.	
		Requiring treatment (2)	Requiring to be kept under observation, but *not* requiring treatment (3)	Requiring treatment (4)	Requiring to be kept under observation, but *not* requiring treatment (5)
	Malnutrition	42	114	131	8
Skin	Ringworm :—				
	Scalp	—	—	57	—
	Body	—	—	140	—
	Scabies	7	—	115	—
	Impetigo	14	2	2,522	—
	Other Diseases (non-Tuberculous)	19	27	1,004	22
Eye	Blepharitis	9	14	342	2
	Conjunctivitis	3	4	265	5
	Keratitis	—	—	7	1
	Corneal Opacities	—	—	—	—
	Defective Vision (excluding Squint)	770	125	759	270
	Squint	52	22	122	29
	Other conditions	—	—	420	15
Ear	Defective Hearing	43	11	84	2
	Otitis Media	48	16	657	—
	Other Ear Diseases	4	1	414	4
Nose and Throat	Chronic Tonsillitis only	244	263	106	47
	Adenoids only	76	56	22	14
	Chronic Tonsillitis and Adenoids	221	95	432	12
	Other Conditions	64	29	1,130	118
Enlarged Cervical Glands (Non-Tuberculous)		14	74	350	151
Defective Speech		2	14	5	2
Heart and Circulation	Heart Disease :—				
	Organic	78	65	50	25
	Functional	6	95	19	1
	Anaemia	45	71	101	23
Lungs	Bronchitis	93	164	505	201
	Other Non-Tuberculous Diseases	7	4	198	52
Tuberculosis	Pulmonary :—				
	Definite	6	4	2	2
	Suspected	4	7	20	17
	Non-pulmonary :—				
	Glands	4	6	13	4
	Bones and Joints	2	1	—	—
	Skin	—	—	1	—
	Other Forms	4	1	11	—
Nervous System	Epilepsy	5	14	10	10
	Chorea	4	11	33	8
	Other Conditions	24	32	33	13
Deformities	Rickets	—	5	2	—
	Spinal Curvature	17	26	—	—
	Other Forms	48	46	31	1
Other Defects and Diseases (excluding Uncleanliness and Dental Diseases)		83	55	5,788	778

Table III.—Return of all Exceptional Children in the Area.

			Total
Children suffering from the following types of Multiple Defect, *i.e.*, any combination of Total Blindness, Total Deafness, Mental Defect, Epilepsy, Active Tuberculosis, Crippling, or Heart Disease			27
Blind	Suitable for training in a School for the totally blind.	At Certified Schools for the Blind	23
		At Public Elementary Schools	—
		At other Institutions	1
		At no School or Institution	1
Partially blind	Suitable for training in a School for the partially blind.	At Certified Schools for the Blind	—
		At Certified Schools for the Partially Blind	68
		At Public Elementary Schools	3
		At other Institutions	—
		At no School or Institution	—
Deaf	Suitable for training in a School for the totally deaf or deaf and dumb.	At Certified Schools for the Deaf	22
		At Public Elementary Schools	—
		At other Institutions	—
		At no School or Institution	1
Partially deaf)	Suitable for training in a School for the partially deaf.	At Certified Schools for the Deaf	—
		At Certified Schools for the Partially Deaf	25
		At Public Elementary Schools	3
		At other Institutions	—
		At no School or Institution	—
Mentally Defective	Feebleminded (cases not notifiable to the Local Control Authority)	At Certified Schools for Mentally Defective Children	251
		At Public Elementary Schools	—
		At other Institutions	—
		At no School or Institution	—
Epileptics	Suffering from severe epilepsy.	At Certified Schools for Epileptics	3
		At Public Elementary Schools	—
		At other Institutions	—
		At no School or Institution	10
Physically Defective	*A* (1). Pulmonary tuberculosis (including pleura and intra-thoracic glands)	At Certified Special Schools	63
		At Public Elementary Schools	187
		At other Institutions	—
		At no School or Institution	62
	A (2). Non-pulmonary tuberculosis.	At Certified Special Schools	67
		At Public Elementary Schools	81
		At other Institutions	—
		At no School or Institution	57
	B.—Delicate children, *i.e.*, all children (except those included in other groups) whose general health renders it desirable that they should be specially selected for admission to an Open Air School.	At Certified Special Schools	146
		At Public Elementary Schools	116
		At other Institutions	2
		At no School or Institution	23
	C.—Crippled children (other than those with tuberculous disease) who are suffering from a degree of crippling sufficiently severe to interfere materially with a child's normal mode of life.	At Certified Special Schools	120
		At Public Elementary Schools	30
		At other Institutions	—
		At no School or Institution	9
	D.—Children with heart disease, *i.e.*, children whose defect is so severe as to necessitate the provision of educational facilities other than those of the public elementary school.	At Certified Special Schools	51
		At Public Elementary Schools	—
		At other Institutions	6
		At no School or Institution	3

TABLE IV.—RETURN OF DEFECTS TREATED DURING THE YEAR ENDED 31ST DECEMBER, 1933.

TREATMENT TABLE

Group I.—Minor Ailments (excluding Uncleanliness, for which see Group VI).

Disease or Defect. (1)	Number of Defects treated, or under treatment during the year.		
	Under the Authority's Scheme. (2)	Otherwise. (3)	Total. (4)
Skin—			
Ringworm Scalp (No. in brackets treated by X-rays)	56 (28)	1	57
Ringworm Body	139	1	140
Scabies	122	—	122
Impetigo	2,535	1	2,536
Other Skin Disease	1,017	6	1,023
Minor Eye Defects— (External and other, but excluding cases falling in Group II).	1,037	9	1,046
Minor Ear Defects	1,118	5	1,123
Miscellaneous .. .. (*e.g.* minor injuries, bruises, sores, chilblains, etc.)	5,625	246	5,871
Total	11,649	269	11,918

Group II.—Defective Vision and Squint (excluding Minor Eye Defects treated as Minor Ailments—Group I).

Defect or Disease. (1)	Number of defects dealt with			
	Under the Authority's Scheme. (2)	Submitted to refraction by private practitioner or at hospital, apart from the Authority's Scheme. (3)	Otherwise. 4)	Total. (5)
Errors of Refraction (including Squint)	3,041	27	18	3,086
Other Defect or Disease of the Eyes (excluding those recorded in Group I.)	18	—	—	18
Total	3,059	27	18	3,104

Total number of children for whom spectacles were prescribed :—	
(i) Under the Authority's Scheme	1,977
(ii) Otherwise	45

Total number of children who obtained or received spectacles :—	
(i) Under the Authority's Scheme	911
(ii) Otherwise	1,111

Group III.—Treatment of Defects of Nose and Throat.

Number of Defects.														
Received Operative Treatment														
Under the Authority's Scheme, in Clinic or Hospital. (1)				By Private Practitioner or Hospital apart from the Authority's Scheme. (2)				Total (3)				Received other forms of Treatment. (4)	Total number treated. (5)
(i)	(ii)	(iii)	(iv)	(i)	(ii)	(iii)	(iv)	(i)	(ii)	(iii)	(iv)		
—	—	—	—	9	21	426	20	9	21	426	20	457	943

(i) Tonsils only. (ii) Adenoids only. (iii) Tonsils and adenoids. (iv) Other defects of the nose and throat.

Group IV.—Orthopaedic and Postural Defects.

	Under the Authority's Scheme. (1)			Otherwise. (2)			Total number treated
	Residential treatment with education (i)	Residential treatment wthout educaton (ii)	Non-residential treatment at an orthopaedic clinic (iii)	Residential treatment with education (i)	Residential treatment without education (ii)	Non-residential treatment at an orthpaedic clinic (iii)	
Number of Children treated	46	—	423	—	—	—	469

Group V.—Dental Defects

(1) Number of Children who were :—

(i) Inspected by the Dentist:

	Aged:			
Routine Age Groups	5	173		
	6	5,061		
	7	4,481		
	8	3,236		
	9	3,592	Total	32,137
	10	3,661		
	11	3,485		
	12	3,735		
	13	3,631		
	14	1,082		
Specials				1,701
			Grand Total	33,838

(ii) Found to require treatment			27,254
(iii) Actually treated			10,660
* (2) Half-days devoted to	Inspection 271 Treatment 1,636	Total	1,907
(3) Attendances made by children for treatment			20,821
(4) Fillings	Permanent teeth 6,065 Temporary teeth 162	Total	6,227
(5) Extractions	Permanent teeth, 4,109 Temporary teeth 19,174	Total	23,283
(6) Administrations of general anaesthetics for extractions			5,980
(7) Other operations	Permanent teeth 517 Temporary teeth 301	Total	818

* In addition to this number, the Dentists devoted 226 sessions to the treatment of mothers and young children under the joint scheme of the Education Committee and the Maternity and Child Welfare Committee.

Group VI.—Uncleanliness and verminous conditions.

(i) Average number of visits per School made during the year by the School Nurses	9
(ii) Total number of examinations of children in the Schools by School Nurses	130,524
(iii) Number of individual children found unclean	3,959
(iv) Number of children cleansed under arrangements made by the Local Education Authority	—
(v) Number of cases in which legal proceedings were taken :—	
(*a*) Under the Education Act, 1921	1
(*b*) Under School Attendance By-laws	6